



ANNEXXUS 300-series User Guide

IMPORTANT: A unique IP address must be assigned to each Annexxus unit before installation.
The technician also must synchronize Annexxus clock for each unit.

Annexxus-series User Guide

by Olga Alexeenko, Technical Writer/Editor and Mykone Saunders, Creative Producer
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FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: **(1)** This device may not cause harmful interference, and **(2)** this device must accept any interference received, including interference that may cause undesired operation.

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Table of Contents

1. Introduction	1
1.1. Precautions	2
1.2. Recommendations and Limitations	3
1.3. Unpacking	4
1.3.1. Annexus 301	4
1.3.2. Annexus 301C	5
1.3.3. Annexus 301C2M	8
1.3.4. Annexus 301D2M	11
1.3.5. Annexus 304	14
1.3.6. Annexus 316	18
1.4. Annexus Default IP Configurations	23
1.5. Annexus Installation/Setup Details	24
1.5.1. Changing IP Address	24
1.5.2. Synchronizing Annexus Clock	27
2. Remote Connection via SRX-Pro/iP-Pro Server	23
2.1. Adding Annexus 301-series Video Input via Search	24
2.2. Manually Adding Annexus Video Input	26
2.3. Basic IP Input Setup	27
2.4. Annexus Advanced Setup	29
2.5. Device Information Setup	30
2.6. Channels Setup	32
2.6.1. Video Settings Setup	33
2.6.2. Video Recording Schedule Setup	36
2.6.3. Motion Detection Setup	38
2.6.4. Video Loss Setup	41
2.6.5. View Tampering Setup	41
2.6.6. Privacy Masking Setup	43
2.6.7. On Screen Displays Setup	44
2.7. Network Setup	47
2.8. PTZ Setup	48
2.9. Sensor/Control Setup	50
2.9.1. Sensor Input(s) Setup	50
2.9.2. Control Output(s) Setup	55
2.9.3. Exception Configuration Setup	56
2.10. User Management Setup	57
2.10.1. Changing Administrative Password	57
2.10.2. Adding/Modifying/Deleting Operator User	58
2.11. Log Records Setup	60
2.11.1. Searching by Type	60
2.11.2. Searching by Time	62
2.11.3. Searching by Type and Time	62
3. Remote Connection via Internet Explorer (Web Browser)	64
3.1. Annexus Browser Interface	66
3.1.1. Tree List. Show/Hide/Activate Channels	67
3.1.2. Video Adjustments Panel	68
3.1.3. Live Video and Audio Streaming	68
3.1.4. PTZ Control Panel	70
3.1.5. OSD Display	71
3.2. Live Backup	74
3.3. Live Snapshot	76
3.4. Search and Playback Internal Video Recordings	77

3.4.1. Search Mode Window	77
3.4.2. Searching Backup Video Recordings	79
3.4.3. Playback Control Panel	80
3.4.4. Saving Backup Files to Local Storage	81
3.4.5. Saving a Snapshot to a Local Storage	83
3.5. Annexus Setup	84
4. Appendix	85
4.1. Upgrading Firmware	86
4.2. Troubleshooting Annexus Web Browser Application	88
4.3. Annexus Finder	90
4.3.1. Installing Annexus Finder	90
4.3.2. Locating Annexus Devices	91
4.3.3. IP Address/Subnet Mask Setup	92
4.3.4. Resetting Password to Factory Default	93
4.4. Annexus Player	94
4.4.1. Installing Annexus Player	94
4.4.2. Opening and Playing Back *.axv Files	95
4.4.3. Converting *.axv File to *.avi Format	100
4.4.4. Saving and Viewing a Snapshot	101
Index	103

1

Introduction

Topics Covered

- Precautions
- Recommendations and Limitations
- Unpacking
- Annexxus Default IP Configurations
- Annexxus Installation/Setup Details

Thank you for purchasing i³ Annexxus-series, an IP video encoder device.

Annexxus network video servers allow to encode analog video into high quality digital video for use and storage on local area network; Annexxus 301C, 301C2M and 301D2M also combine the features of a network video server with the features of a camera.

The benefits of this technology allow for increased flexibility within the surveillance network. Annexxus encoders use an H.264 compression, which allows transmission of full-motion video at 30 frames per second at 704x480 resolution (depending on the model).

Depending on the Annexxus-series model, Annexxus offers 1 or 4 video inputs with synchronized audio capabilities and PTZ functionality. Annexxus-series support the following resolutions: 176x240, 352x240, 704x240, and 704x480. Annexxus 301C2M and 301D2M additionally support the following resolutions: 1280x720 and 1600x1200.

The video from Annexxus-series can be viewed remotely with the help of built-in Annexxus web browser (via Internet Explorer) or through SRX-Pro/iP-Pro Server or Remote (version 1.512 and up) provided Annexxus module is properly configured in SRX-Pro/iP-Pro software setup.

Both NTSC and PAL analog cameras are supported by Annexxus modules. The IP address for the Annexxus can be manually configured via Internet. Once the IP module is configured correctly, the cameras connected via Annexxus can be added to the SRX-Pro/iP-Pro list via IP camera setup page.

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1.1. Precautions

When selecting a storage location for your Annexxus system, be sure to avoid:

- excessive heat, such as direct sunlight or heating appliances
- moisture, dust, and smoke
- strong magnetic fields
- temperatures below 5° Celsius or 41° Fahrenheit
- any obstructions to the system's ventilation holes

Before installing this system, always ensure the:

- system and its connecting cables have sufficient space
- system is placed on an even surface
- system is situated far from electronic equipment such as microwaves, radios, fridge compressors, or any type of wireless equipment such as telephones or cell phones
- system is kept at room temperature (18°-25° Celsius or 64.4°-77° Fahrenheit)

1.2. Recommendations and Limitations

ⁱ³ International recommends the usage of NETGEAR FS728TP 10/100 Smart Switch with 24 PoE ports together with Annexus-series iP encoders.

WARNING: The maximum cable length must not exceed 300 feet. As long as the cable length recommendation is met, NETGEAR FS728TP will support up to 24 MegaPixel cameras.

For stable performance, do NOT exceed the approved number of cameras. Follow the recommended frame rate and resolution when combining different types of cameras on the same SRX-Pro system.

Approved iP/analog camera combinations on SRX-Pro 1.512 and up (XPe 3.0 OS)

IP Camera type	IP Camera number	FPS @ Resolution	PACDM lanes	
			Serial	TCP/IP
Analog	16	30fps x 16 @ 360x240	0	0
IP Camera	6 IQinVision (2MP)	3fps x 6 @ 1600x1200		
	2 IQinVision (5MP)	3fps x 2 @ 2590x1600		
Analog	16	30fps x 16 @ 360x240	0	0
IP Camera	4 AXC2M	4fps x 4 @ 1600x1200		
	4 AX301	30fps x 4 @ 704x480		
Analog	16	15fps x 16 @ 720x240	0	
IP Camera	8 (assorted models) (4xAX301 + 1xAX304 + 1xAX104 + 1xIQinVision + 1xAJC2M)	various frame & resolution	4	0
Analog	16	30fps x 16 @ 360x240	0	8
IP Camera	4 AXC2M	4fps x 4 @ 1600x1200		

For stable performance, do NOT exceed the approved number of iP cameras/encoders. Follow the recommended frame rate and resolution when combining different types of iP cameras/encoders on the same iP-Pro system.

Approved iP camera combinations on iP-Pro 1.512 and up (XPe 3.0 OS)

IP Camera type	IP Camera number	FPS @ Resolution	PACDM lanes	
			Serial	TCP/IP
ANNEXXUS 301	20	30fps x 20 @ 720x480	0	0
ANNEXXUS 301C2M	12	4fps x 12 @ 1600x1200	0	0
ANNEXXUS 301C2M	12	4fps x 12 @ 1600x1200	0	16
ANNEXXUS 301	4	30fps x 3 @ 720x480	0	0
ARECONT 5MP	6	3fps x 6 @ 2590x1600	0	0
IQINVISION 2MP	12	3fps x 12 @ 1600x1200	0	0

1.3. Unpacking

The following items should be included in the shipping box. With any concerns, please contact your dealer or call our Customer Care Department toll free at 1.866.840.0004.

Annexxus Accessories					
Annexxus 301	Annexxus 304	Annexxus 316	Annexxus 301C	Annexxus 301C2M	Annexxus 301D2M
(AX301)	(AX304)	(AX316)	(AX301C)	(AX301C2M)	(AX301D2M)
					
Annexxus 301 encoder	Annexxus 304 encoder	Annexxus 316 encoder	Annexxus 301C IP camera	Annexxus 301C2M MegaPixel IP camera	Annexxus 301D2M MegaPixel IP dome camera
Resource CD: User Manual, Annexxus Player, IP Finder	Resource CD: User Manual, Annexxus Player	Resource CD: User Manual, Annexxus Player	Resource mini CD: User Manual, Annexxus Player, IP Finder	Resource mini CD: User Manual, Annexxus Player, IP Finder	Resource mini CD: User Manual, Annexxus Player, IP Finder
BNC to RCA adapter	BNC to RCA adapter (x4)	DB25 connector (x2) Mounting bracket (x2)	CS adaptor ring	CS adaptor ring	Drywall anchor (x3)
Mounting bracket (x2)	Mounting bracket (x2)				Mounting screws (x3)
Mounting screws (x4 + 2 spare)	Mounting screws (x4 + 2 spare)	Mounting screws (x4 + 2 spare)			Star screwdriver
Installation Manual Booklet	Installation Manual Booklet	Installation Manual Booklet			BNC output cable for external monitor (optional)
					Audio/USB extension cable (optional)
					Alarm/RS485 extension cable (optional)

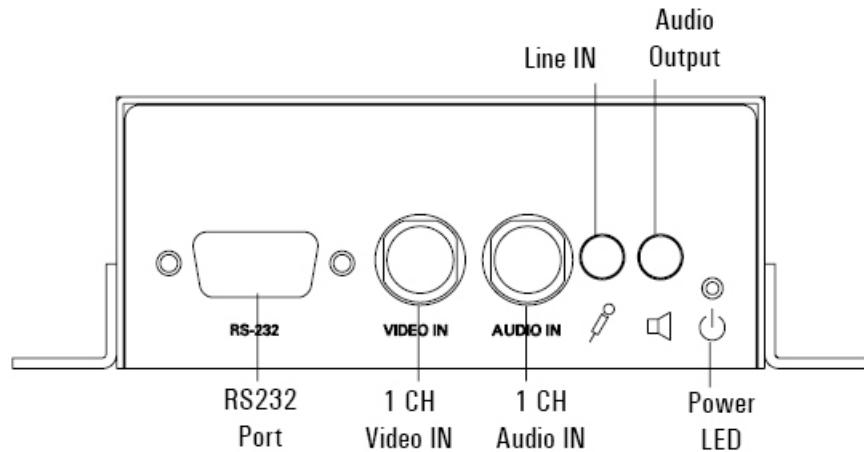
1.3.1. Annexxus 301

Annexxus 301 video encoder accepts AC 24V power. This model features 1 BNC video and 1 BNC audio inputs; BNC to RCA adapter is provided for an RCA audio input. Annexxus 301 features one (1) alarm input and one (1) relay output; PTZ control can be accomplished via RS-485; serial RS-232 port is provided for troubleshooting purposes. RJ-45 port allows for the network connection. This Annexxus model supports two-way audio, however regular microphone may not be used as a Line IN device; special Line IN audio device is required.

Annexxus 301 Front View



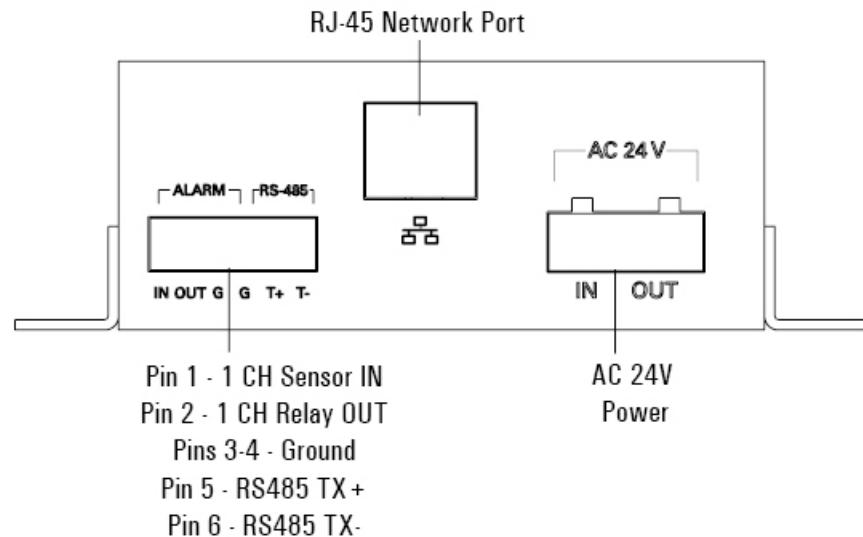
Annexxus 301 Connections Diagram



Annexus 301 Rear View



Annexus 301 Connections Diagram



1.3.2. Annexus 301C

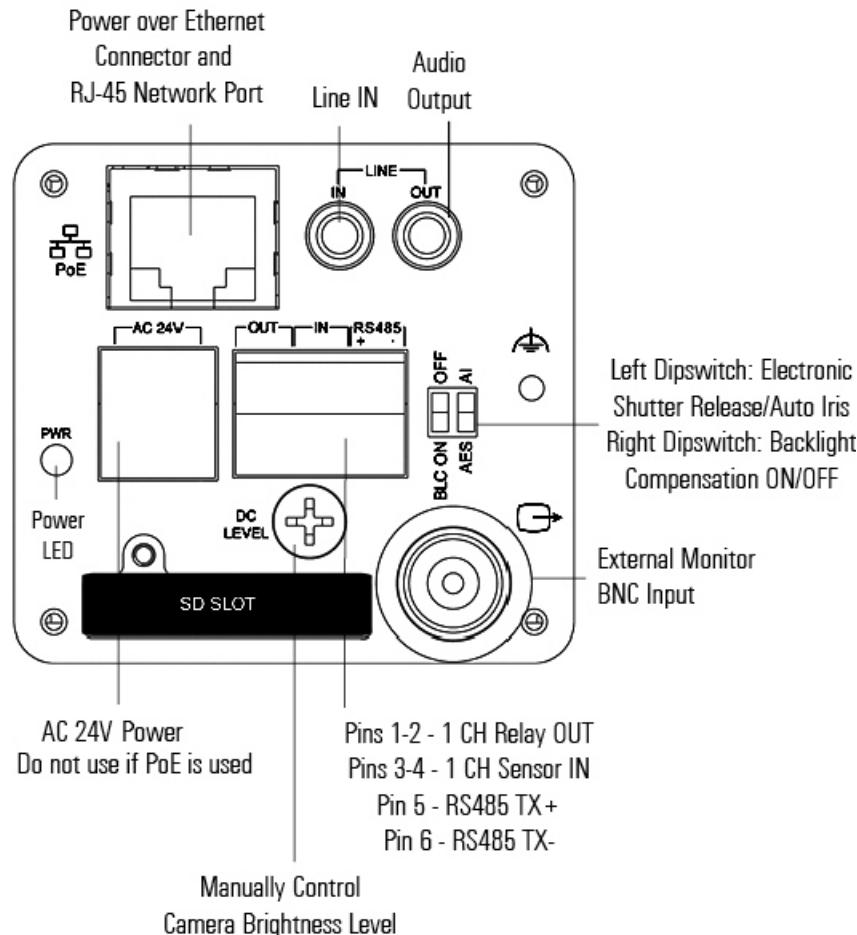
Annexus 301C model combines features of a video camera, video recorder and an IP video encoder. This Annexus model accepts PoE (Power over Ethernet) and AC 24V power (only one type of power should be used at the same time). Annexus 301C features one (1) alarm input and one (1) relay output; one (1) BNC connector is provided for external monitor output; RJ-45 port allows for the network connection. This Annexus model supports two-way audio, however regular microphone may not be used as a Line IN device; special Line IN audio device is required.

Annexus 301C supports SD media, which allows for internal video recording. This model also supports manual brightness control, Electronic Shutter Release/Auto Iris and Backlight Compensation functions.

Specifications	
Model Number	Annexus 301C
Software Integration	SRX-Pro 1.512 and up, iP-Pro 1.512 and up, IE 6.0
Image Sensor	1/3" 2 MegaPixel CMOS
Video Compression	
Video Compression	MPEG-4/H.264
Video Output	32K ~ 2M, Adjustable (8Mbps max.)
Image Resolution (NTSC/PAL)	704x480/704x576, 704x240/704x288, 352x240/352x288, 176x120/176x144
Frame Rate (NTSC/PAL)	30 FPS (60Hz)/25 FPS (50Hz) @ D1, 2CIF, CIF and QCIF
Software	
Web Browser	Microsoft Internet Explorer 6.0 or above
Password Protect	Configured by the Administrator
Local Recording	SD card (up to 2GB maximum)
Electric	
Sync. System	Internal
Lens	Lens not included
Minimum Illumination	0.5 Lux (F1.2); 0.1 Lux (F1.2, Sensitization X5)
Monitor Output	1Vp-p Composite Output, 75 Ω
Audio Input	2.0 Vp-p, 1K Ω
Audio Output	Linear Electrical Level, 600 Ω
Alarm	1 input and 1 output
USB	No
SD card support	Yes
RS-485 (for future applications, currently not in use)	Yes
Network	
Ethernet	Ethernet(10/100 Base-T) Self-Adaptive; RJ-45
Interface	
Monitor Output	BNC
Network Port	RJ-45 Female
USB Port	No
Audio IN & OUT Ports	3.5 mm (1/8") mini audio jacks
Alarm IN & OUT Ports	Screw less Terminal Blocks. Pins 1-2 (OUT), Pins 3-4 (IN)
RS-485 Port	Screw less Terminal Blocks (for future applications, currently not in use)
Power Supply	
Power Requirement	24VAC \pm 10%; PoE (Power over Ethernet)
Power Consumption	5W (Max.)

Environment	
Operating Temperature	-10°C ~ 50°C (14 ~ 122 °F)
Operating Humidity	30% ~ 90% RH
Mechanism	
Camera Mount	C/CS mount
Dimensions(WxHxL)	65mm x 67mm x 122mm (2.5" x 2.6" x 4.8")
Weight	600g (1.32 lb) approx.
Certification	FCC, CE

Annexus 301C Side View**Annexus 301C Rear View****Annexus 301C Connections Diagram**



1.3.3. Annexxus 301C2M

Annexxus 301C2M model combines features of a MegaPixel video camera, video recorder and an IP video encoder. This Annexxus model accepts PoE (Power over Ethernet) and AC 24V power (only one type of power should be used at the same time). Annexxus 301C2M features one (1) alarm input and one (1) relay output; one (1) BNC connector is provided for external monitor output; RJ-45 port allows for the network connection. This Annexxus model supports two-way audio, however regular microphone may not be used as a Line IN device; special Line IN audio device is required.



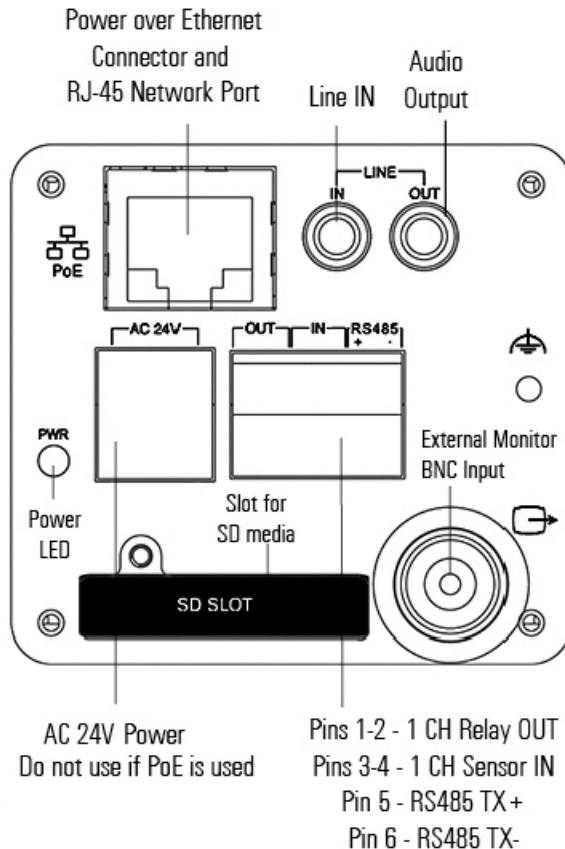
Note

Annexxus 301C2M is not a PTZ camera.

Specifications	
Model Number	Annexxus 301C2M
Software Integration	SRX-Pro 1.512 and up, iP-Pro 1.512 and up, IE 6.0
Image Sensor	1/3" 2 MegaPixel CMOS
Effective Pixels	1600 (H) X 1200 (V)
Video Compression	
Video Compression	MPEG-4/H.264
Video Output	32K ~ 2M, Adjustable (8Mbps max.)

Image Resolution (NTSC/PAL)	1600x1200, 1280x720, 704x480/704x576, 704x240/704x288, 352x240/352x288, 176x120/176x144
Frame Rate (NTSC/PAL)	30 FPS (60Hz)/25 FPS (50Hz) @ D1, 2CIF, CIF and QCIF; 15 FPS (60Hz)/25 FPS (50Hz) @ HD; 10 FPS (60Hz)/12FPS (50Hz) @ UXGA
Software	
Web Browser	Microsoft Internet Explorer 6.0 or above
Password Protect	Configured by the Administrator
Local Recording	SD card (up to 8GB maximum)
Electric	
Sync. System	Internal
Lens	Lens not included
Minimum Illumination	0.5 Lux (F1.2); 0.1 Lux (F1.2, Sensitization X5)
Monitor Output	1Vp-p Composite Output, 75 Ω
Audio Input	2.0 Vp-p, 1K Ω
Audio Output	Linear Electrical Level, 600 Ω
Alarm	1 input and 1 output
USB	No
SD card support	Yes
RS-485 (for future applications, currently not in use)	Yes
Network	
Ethernet	Ethernet(10/100 Base-T) Self-Adaptive; RJ-45
Interface	
Monitor Output	BNC
Network Port	RJ-45 Female
USB Port	No
Audio IN & OUT Ports	3.5 mm (1/8") mini audio jacks
Alarm IN & OUT Ports	Screw less Terminal Blocks. Pins 1-2 (OUT), Pins 3-4 (IN)
RS-485 Port	Screw less Terminal Blocks (for future applications, currently not in use)
Power Supply	
Power Requirement	24VAC \pm 10%; PoE (Power over Ethernet)
Power Consumption	5W (Max.)
Environment	
Operating Temperature	-10°C \sim 50°C (14 \sim 122 °F)
Operating Humidity	30% \sim 90% RH
Mechanism	
Camera Mount	C/CS mount
Dimensions(WxHxL)	65mm x 67mm x 122mm (2.5" x 2.6" x 4.8")
Weight	600g (1.32 lb) approx.
Certification	FCC, CE

Annexxus 301C2M Side View**Annexxus 301C2M Rear View****Annexxus 301C2M Connections Diagram**



1.3.4. Annexxus 301D2M

Annexxus 301D2M model combines features of a MegaPixel video dome camera, video recorder and an IP video encoder. This Annexxus model accepts PoE (Power over Ethernet), DC 12V and AC 24V (only one type of power should be used at the same time). Annexxus 301D2M features one (1) alarm input and one (1) relay output; one (1) BNC connector is provided for external (spot) monitor output; RJ-45 port allows for the PoE or network connection; audio in/out connectors allow for 1 audio channel.

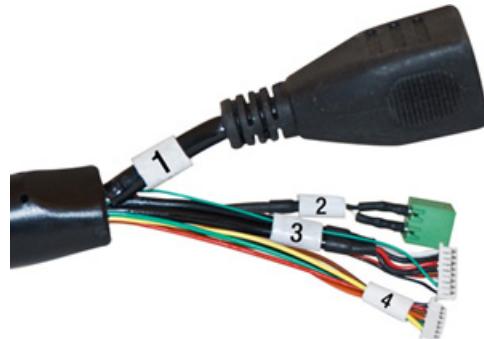
This Annexxus model supports two-way audio, however regular microphone may not be used as a Line IN device; special Line IN audio device is required.

 Note
Annexxus 301D2M is not a PTZ camera. RS-485 connection is currently not being used by this encoder model.

Specifications	
Model Number	Annexxus 301D2M
Software Integration	SRX-Pro 1.520 and up, iP-Pro 1.520 and up, IE 6.0
Image Sensor	1/3" 2 MegaPixel CMOS
Effective Pixels	1600 (H) X 1200 (V)
Video Compression	
Video Compression	MPEG-4/H.264
Video Output	32K ~ 2M, Adjustable (8Mbps max.)
Image Resolution (NTSC/PAL)	1600x1200, 1280x720, 704x480/704x576, 704x240/704x288, 352x240/352x288, 176x120/176x144

Frame Rate (NTSC/PAL)	30 FPS (60Hz)/25 FPS (50Hz) @ D1, 2CIF, CIF and QCIF; 15 FPS (60Hz)/25 FPS (50Hz) @ HD; 10 FPS (60Hz)/12FPS (50Hz) @ UXGA
Software	
Web Browser	Microsoft Internet Explorer 6.0 or above
Password Protection	Configured by the Administrator
Electric	
Sync. System	Internal
Built-in Lens	$f = 2.7 \sim 9 \text{ mm}$, F1.2, varifocal (Megapixel lens)
View Angle	Horizontal: 101° (W) $\sim 30.4^\circ$ (T), Vertical: 75° (W) $\sim 23^\circ$ (T)
Gamma Correction	0.45
Minimum Illumination	0.5 Lux (F1.2); 0.1 Lux (F1.2, Sensitization X5)
Monitor Output	1Vp-p Composite Output, 75Ω
Audio Input	2.0 Vp-p, $1K\Omega$
Audio Output	Linear Electrical Level, 600Ω
Alarm	1 input and 1 output
USB	Yes (currently not supported)
Network	
Ethernet	Ethernet(10/100 Base-T) Self-Adaptive; RJ-45
Interface	
Monitor Output	BNC
Network Port	RJ45 Female
USB Port	Type A Female
Audio IN & OUT Ports	3.5 mm (1/8") mini audio jack
Audio IN & OUT Ports	Screw less Terminal Blocks
RS-485 Port (for future applications, currently not in use)	Screw less Terminal Blocks (for future applications, currently not in use)
Power Supply	
Power Requirement	12VDC/24VAC $\pm 10\%$; PoE (Power over Ethernet)
Power Consumption	6W (Max.)
Environment	
Operating Temperature	$-10^\circ\text{C} \sim 50^\circ\text{C}$ ($14 \sim 122^\circ\text{F}$)
Operating Humidity	30% \sim 90% RH
Storage Temperature	$-20^\circ\text{C} \sim 60^\circ\text{C}$ ($-4 \sim 140^\circ\text{F}$)
Mechanism	
Angle control 3-AXIS	350° approx.
Panning range	180° approx.
Tilting range	90° approx.
Dimensions(WxH)	160mm \times 145mm (6.3" \times 5.7")
Weight	1,300g (2.87 lbs) approx.
Vandal Resistant	1,000kg (2204 lbs) impact resistance

Certification	IP67, FCC, CE
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Annexxus 301D2M MegaPixel iP dome camera**Annexxus 301D2M Main Cable (Optional)**

(1) RJ-45 Female connector. Ethernet or PoE connection.

(2) Power Input. White wire - 12VDC/24VAC; Black wire - GND/24VAC

(3) Connect to Audio extension cable

(4) Connect to Alarm/RS-485 extension cable

Annexxus 301D2M Audio extension cable (Optional)

(A) Audio In (red connector)

(B) Audio Out (green connector)

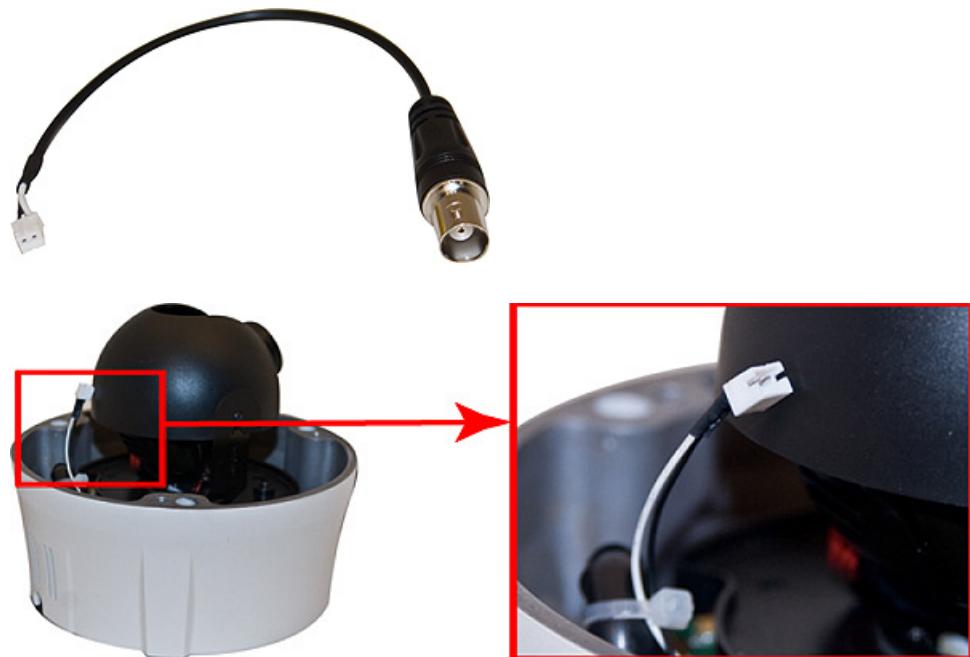
(C) USB connector (currently not supported)

Annexus 301D2M Alarm/RS-485 extension cable (Optional)

- (A) GND (grey wire)
- (B) Alarm In (red wire)
- (C) Alarm Out B (brown wire)
- (D) Alarm Out A (orange wire)
- (E) RS-485 (-) (green wire) (for future applications, currently not in use)
- (F) RS-485 (+) (yellow wire) (for future applications, currently not in use)

Annexus 301D2M Spot Monitor BNC cable

To use spot monitor, connect the attached BNC spot monitor cable to the connector located inside the camera dome. See detailed image below. To access the connector, carefully remove the camera dome and locate the 2-pin connector inside.

**1.3.5. Annexus 304**

Annexus 304 video encoder accepts AC 24V power. This model features 4 BNC video and 4 BNC audio inputs; BNC to RCA adapters are provided for RCA audio inputs. Annexus 301 features four (4) alarm inputs and two (2) relay outputs; PTZ control can be accomplished via RS-485 TCP/IP port; RS-232 TCP/IP port is provided for troubleshooting purposes. RJ-45 network port allows for the network connection. This Annexus model supports two-way audio, however regular microphone may not be used as a Line IN device; special Line IN audio device is required.

The Annexus 304 Video IN ports consist of four (4) BNC composite video inputs that allow the video source - camera or analog video matrix, connection. One to four inputs may be used depending on customer preference. The Annexus 304 supports 120 fps or 60 fps depending on selected resolution. Below is the table of frame rate and channel limitations based on selected resolution:

Frame rate vs Number of video channels

Resolution/ Channel	352x240 / 352x288	704x240 / 704x288	704x480 / 704x576
CH1	30/25 fps max	30/25 fps max	30/25 fps max
CH2	30/25 fps max	30/25 fps max	30/25 fps max
CH3	30/25 fps max	30/25 fps max	N/A
CH4	30/25 fps max	30/25 fps max	N/A

All four channels are supported at 30 fps (NTSC) or 25 fps (PAL) with CIF or 2CIF resolution via web browser application. Only first two channels are supported when the resolution is set to 4CIF quality.

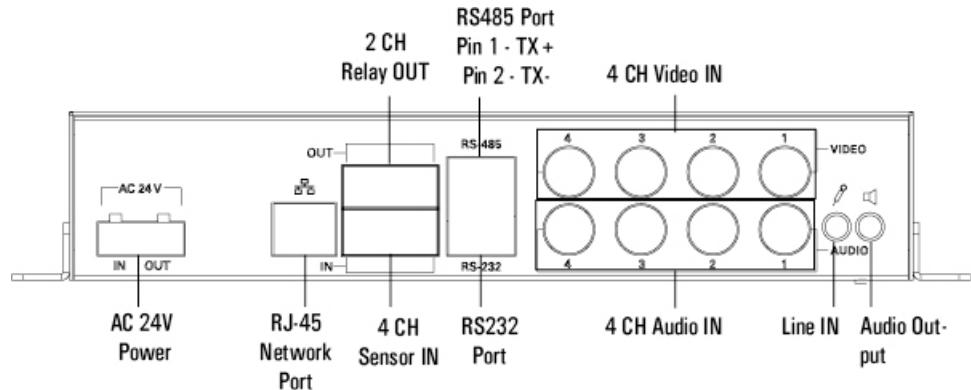
Annexus 304 Front View



Annexus 304 Rear View

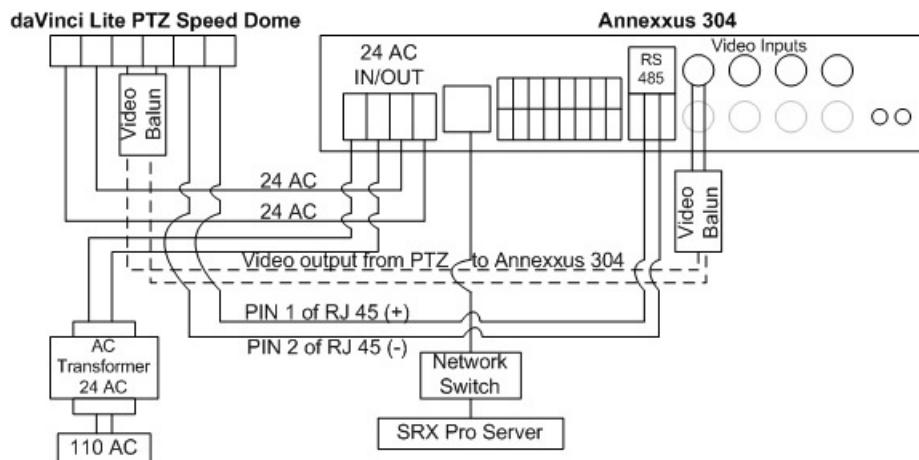


Annexus 304 Connections Diagram



1.3.5.1. Connecting daVinci Lite PTZ to Annexus 301/304

The diagram below outlines the CAT-5 connection of a daVinci Lite PTZ camera to Annexus 304 module.



IMPORTANT: If using the power output from the Annexus 304 or 301 to power the cameras, the 24VAC input must compensate for the power consumption requirement of all devices in the installation.

Model	Power requirement
Annexus 301	250 mA
Annexus 301C/C2M	350 mA
Annexus 301D2M	400 mA
Annexus 304	700 mA
Annexus 316	3000 mA
daVinci Lite PTZ	750 mA

Example: Four (4) daVinci Lite PTZ cameras and one (1) Annexus 304 encoder are used in the installation.

Using the table above, the total power requirement is $(750 \text{ mA} \times 4) + (700 \text{ mA} \times 1) = 3.7 \text{ Amps} \approx 4 \text{ Amps}$. For an installation of 4 daVinci Lite cameras and 1 Annexus 304 module at least 4 Amps should be available.

Annexus-series encoders accept BNC camera inputs (except for Annexus 316). However, if the installer would like to use CAT4E cable as opposed to the RG59 coaxial cable to increase cost efficiency and simplify the installation process, video baluns must be used on both sides of the installation - one for each camera and one for the Annexus encoder.

If coaxial cable installation is acceptable, no additional hardware is required as the daVinci camera has BNC video output and Annexxus 301/304 encoders accept BNC video inputs. The Annexxus 316 encoder accepts DB25 video inputs.

Important

When installing PTZ, remember the address of the camera ID, which is set with a dip switch.

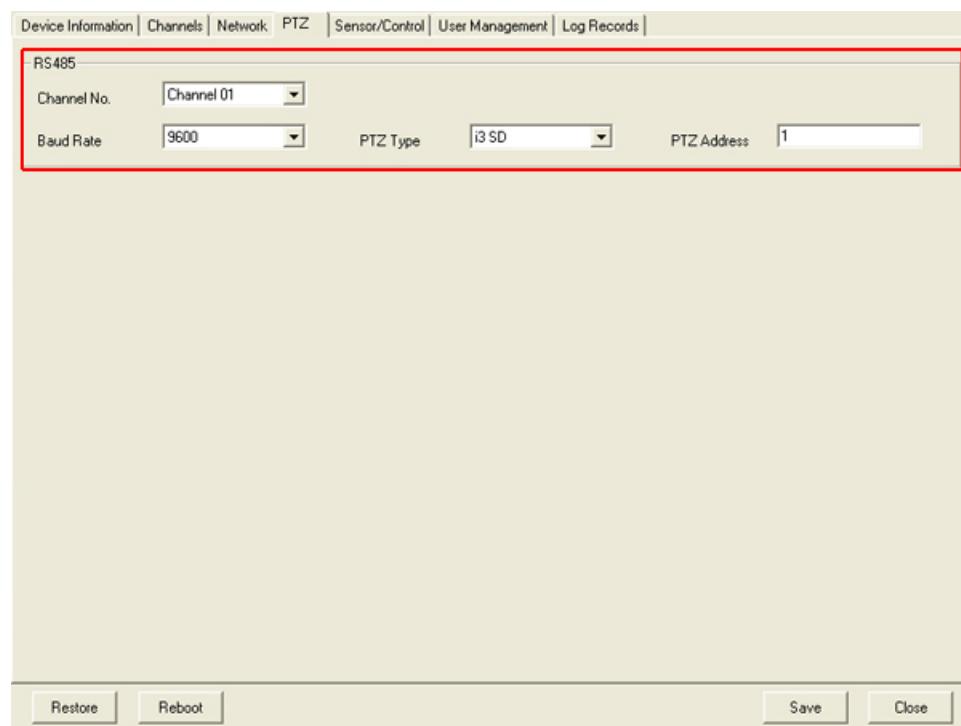
Note

PTZ tab is only available for Annexxus 301, 304, and 316 models.

After hardware installation, Annexxus 301/304/316 IP address must be changed. Once the new IP address is assigned, connect to the Annexxus module through the Internet Explorer or through SRX-Pro/IP-Pro Server, open Annexxus setup and configure the RS485 section under PTZ tab:

1. Select the Channel number (BNC number on Annexxus module), where the PTZ cameras is connected
2. Set the Baud Rate to **9600**
3. Set the PTZ Type to **i3 SD**
4. Enter the PTZ Address (Dip-switch configured camera ID)
5. Click **Save** to save the PTZ settings

Consult the image below for more information.



1.3.6. Annexus 316

In the latest innovation by i3, the Annexus 316 is a 16-channel video encoder. The Annexus 316 is a transitional device that allows 16 channels of analog video to be converted into IP video. Utilizing H.264 compression, the Annexus 316 will transmit video over the network much faster, using less bandwidth, and projecting video at a higher resolution.

The Annexus 316 is designed with ingenious foresight. It accepts AC 24V power - the same voltage used for all analog cameras - allowing for easier installation. This model accepts up to 16 video (DB25 connector) and 4 audio inputs (Stereo Jack 3.5 mm). Annexus 316 features four (4) alarm inputs and four (4) relay outputs; PTZ control can be accomplished via RS-485 TCP/IP port; RJ-45 network port allows for the network connection.

This Annexus model supports two-way audio; however, regular microphone may not be used as a Line IN device - special Line IN audio device is required.

The AX316 can handle 1TB of internal hard drive for backup, and it offers the addition of an external eSATA input.

Video can be viewed remotely with Internet Explorer 6.0/7.0, or i3 IP-Pro - NVR software. AX316 also integrates seamlessly with existing hybrid DVR solution - SRX-Pro software.

AX316 is rack mountable and wall mountable for those who need to locate the system in an IT or utility room. It is a cost-effective encoder for those who want to transition to IP technology, but it continues to expand the life-cycle of the existing analog system. Disposing of existing analog systems is no longer an option; rather, the Annexus 316 helps to rejuvenate analog systems into IP video solutions.

Annexus 316 Specifications

Electrical	
Video Compression Standards	H.264
Video Data Rate	4.8 kbps - 1 Mbps per channel
Video Resolution	704 x 576/704 x 480 (120/100 fps) (D1: 7.5/8 fps) 704 x 288/704 x 240 (200/240 fps) (2CIF: 12.5/15 fps) 352 x 288/352 x 240 (400/480 fps) (1CIF: 25/30 fps) 176 x 144/176 x 120 (400/480 fps) (QCIF: 25/30 fps)
GOP Structure	I, IP
Overall Delay	120 ms
Network Protocols	RTP, Telnet, UDP, TCP, IP, HTTP, IGMP V2, IGMP V3, SNMP, (V1/V2c/V3 MIB-II) ICMP, ARP
RAM Recording	32MB total, 8 MB per channel
Software Update	Flash ROM, remote programmable
Configuration	Configuration Manager or web browser
Ethernet	10/100/1000 Base-T auto-sensing, half/full duplex, RJ45
Encoder	Interfaces
Video In	16 analog composite: NTSC/PAL; BNC connector 75 Ohm switchable, 1 Vp.p
Alarm In	4 x (non-isolated closure contact type), max.
Relay Out	4 x 30 Vp-p, 2 A, 8 position spring clamp contacts
RS485 Port	4 x 485, 6 position spring clamp contacts

Audio Encoders	
Audio Standard	G.711; 300 Hz - 3.4 kHz
Audio Data Rate	80 kbps
Audio Sampling Rate	8 kHz
Line In	Stereo jack 3.5 mm, 9 kOhm typ., 5.5 Vp-p max.
Mechanical	
Weight	Approx. 2.0 kg (2.1 lb)
Environmental	
Input Voltage	24VAC
Power Consumption	Approx. 45 VA
Heat Output	205 BTU/h
Operating Temperature	0° C - +50° C (+32° F - +122° F) ambient temperature
Humidity	20 - 80%, atmospheric humidity (not cond.)
Certification	
	CE, ULc & UL, FCC
Warranty	
	One year parts and labour
Supported Products	
	IP-Pro 4/10/16/32
	SRX-Pro 24020/24024/48032

The Annexus 316 Video IN ports consist of two (2) DB26 video inputs that allow the video source - camera or analog video matrix - connection. One to two inputs may be used depending on customer preference. The Annexus 316 supports 120 fps or 480 fps depending on selected resolution. Below is the table of frame rate and channel limitations based on selected resolution:

Frame rate vs Number of video channels

Resolution/ Channel	704 x 576/704 x 480 (D1)	704x240 / 704x288 (2CIF)	352 x 288 / 352 x 240 (CIF)	176 x 144 / 352 x 240 (QCIF - Web Interface ONLY)
CH1	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH2	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH3	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH4	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH5	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH6	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH7	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH8	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH9	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH10	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH11	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH12	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH13	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH14	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH15	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max
CH16	6.25/7.5 fps max	12.5/15 fps max	30/25 fps max	30/25 fps max

It can deliver 16 channels of video at 25 images (PAL) or 30 images (NTSC) per second at 1CIF resolution, and it is capable of providing 4CIF/Full D1 resolution at 6.7/7.5 images per second for every video channel.

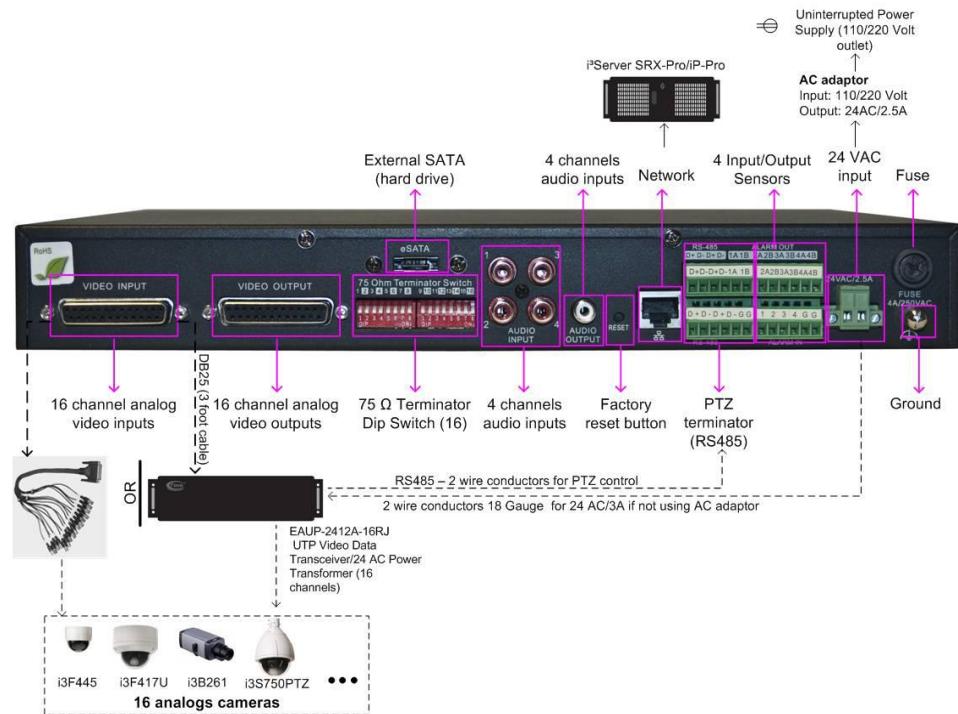
Annexus 316 Front View



Annexus 316 Rear View

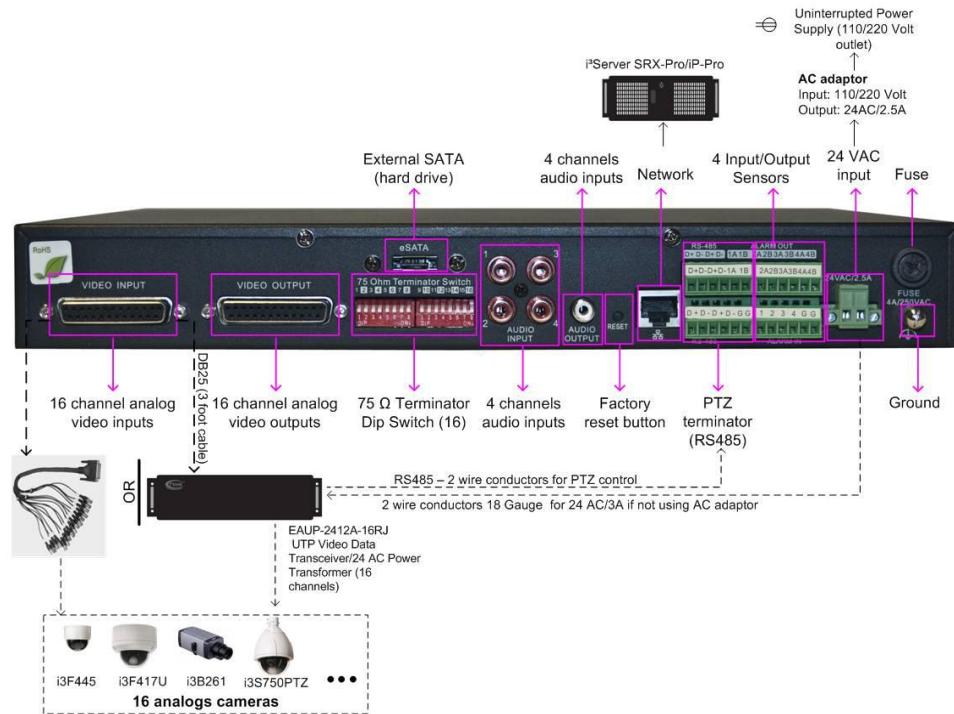


Annexus 316 Connections Diagram



1.3.6.1. Connecting daVinci Lite PTZ to Annexus 316

The diagram below outlines the CAT-5 connection of a daVinci Lite PTZ camera to Annexus 316 module.



IMPORTANT: If using the power output from the Annexus 316, 304, or 301 to power the cameras, the 24VAC input must compensate for the power consumption requirement of all devices in the installation.

Model	Power requirement
Annexus 301	250 mA
Annexus 301C/C2M	350 mA
Annexus 301D2M	400 mA
Annexus 304	700 mA
Annexus 316	3000 mA
daVinci Lite PTZ	750 mA

Example: Sixteen (16) daVinci Lite PTZ cameras and one (1) Annexus 316 encoder are used in the installation.

Using the table above, the total power requirement is $(750 \text{ mA} \times 16) + (750 \text{ mA} \times 16) = 15 \text{ Amps}$. For an installation of 16 daVinci Lite cameras and 1 Annexus 316 module, at least 16 Amps should be available.

Only the Annexus 316 encoder accepts DB26 camera inputs. However, if the installer would like to use BNC cable connections, it is required that the DB25 cable have one (1) fly-out cable with 16 BNC connectors - one for each camera.

If required to connect the AX316 to a UTP transceiver, a DB25 to DB25 connection is required.

When installing PTZ, remember the address of the camera ID, which is set with a dip switch.

! Important

When installing PTZ, remember the address of the camera ID, which is set with a dip switch.

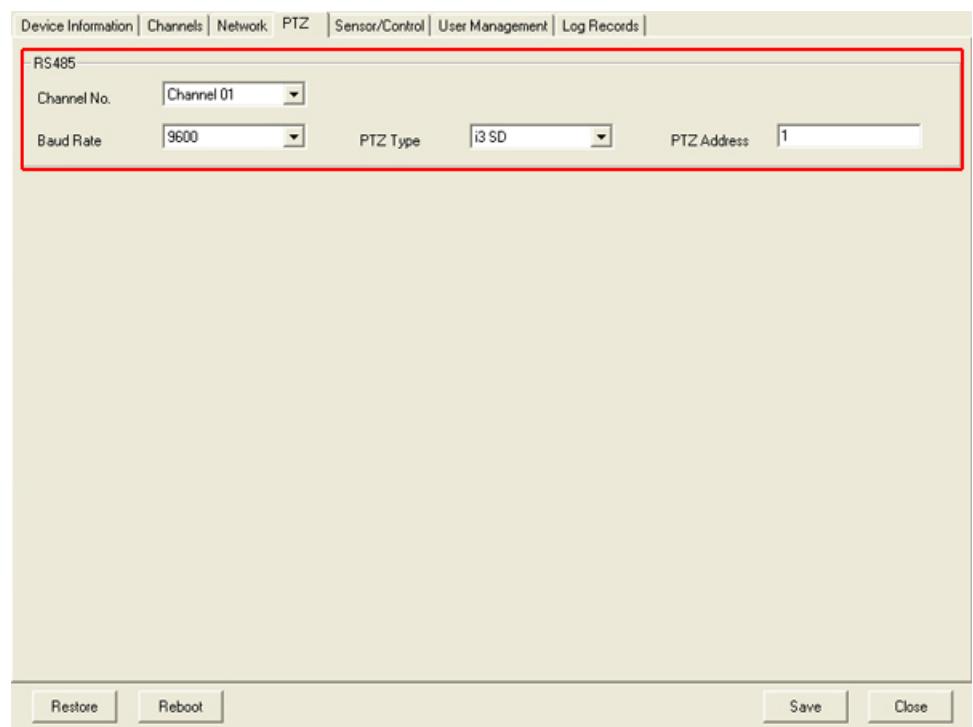
Note

PTZ tab is only available for Annexus 301, 304, and 316 models.

After hardware installation, Annexus 301/304/316 IP address must be changed. Once the new IP address is assigned, connect to the Annexus module through the Internet Explorer or through SRX-Pro/iP-Pro Server, open Annexus setup and configure the RS485 section under PTZ tab:

1. Select the Channel number (BNC number on Annexus module), where the PTZ cameras is connected
2. Set the Baud Rate to **9600**
3. Set the PTZ Type to **i3 SD**
4. Enter the PTZ Address (Dip-switch configured camera ID)
5. Click **Save** to save the PTZ settings

Consult the image below for more information.



1.4. Annexxus Default IP Configurations

RJ-45 Network Port on the Annexxus-series unit allows it to be connected to an Ethernet/Fast Ethernet standard (10/100Base-TX) network, complying with the IEEE 802.3U standard. Annexxus device may be connected to a hub, switch or router with a straight through CAT5e cable, or directly to the DVR/NVR with a crossover CAT5e cable.

Warning

Before installing the unit on-site, you **MUST** change the IP Address of each Annexxus module. See Changing IP Address section for more information.

Network Settings:

Annexxus' default IP configurations:

IP Address: 192.0.0.64

Subnet Mask: 255.255.255.0

DVR's sample IP address:

IP Address: 192.0.0.65

Subnet Mask: 255.255.255.0

Important

If SRX-Pro/iP-Pro server is behind firewall, network port 8000 (default port) must be forwarded to connect to Annexxus 304. In order to use Annexxus web browser, port 80 must also be forwarded.

For LAN connection, the first three numbers of the Annexxus' and SRX-Pro/iP-Pro server's IP address and the Subnet Mask should be the same, otherwise no video will be displayed on SRX-Pro/iP-Pro. When connecting Annexxus device to WAN, IP Address, Subnet Mask and Gateway must be configured according to specs provided by the Internet provider. The IP address and Subnet Mask numbers on DVR/NVR and Annexxus do not have to match when Annexxus is connected to WAN.

1.5. Annexus Installation/Setup Details

Before installing Annexus module at the client's location, the technician **must** complete the following:

- Assign a unique IP address to each Annexus module.

Unless this step is completed prior to installation, the customer will be unable to detect Annexus module on their LAN/WAN network.

- Synchronize Annexus clock to the time zone, where the module is being installed.

Unless this step is completed, the time stamp on video recordings and log records (if available) will not match the current time.

1.5.1. Changing IP Address

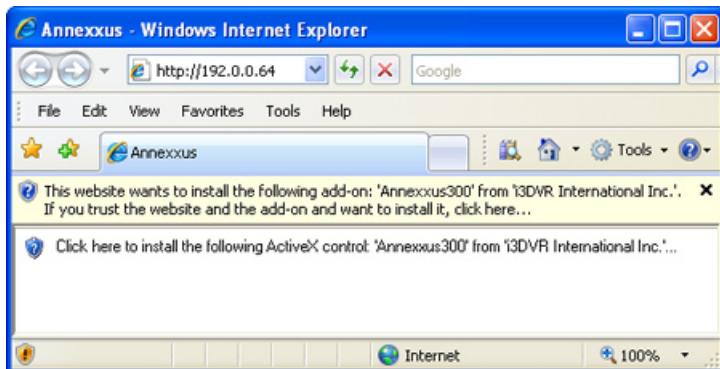
Each Annexus device comes with pre-assigned IP scheme: IP Address **192.0.0.64**; Subnet Mask: **255.255.255.0**

Important

Before installing the Annexus unit, technician must assign a unique IP Address to each unit in accordance with the customer's IP scheme. Annexus web browser application is used to change Annexus default IP address.

To change Annexus IP address, do the following:

1. Connect Annexus-series to the power source in accordance with the connections diagram
2. Connect Annexus-series and a local PC/laptop to the dedicated router/switch
3. Open Internet Explorer browser window on a local PC/laptop and enter **http://192.0.0.64** in the address line.
4. You will be prompted to install Active X control. Click on the banner and select **Install Active X...** from the context menu.



5. In the Internet Explorer - Security Warning window, click **Install**.



6. Annexus web browser screen will be displayed with the Login window. Enter Annexus default Username (**admin**) and Password (**1234**) and click **Login**.



 **Note**

The login is case sensitive. Manage Annexus users in User Management setup.

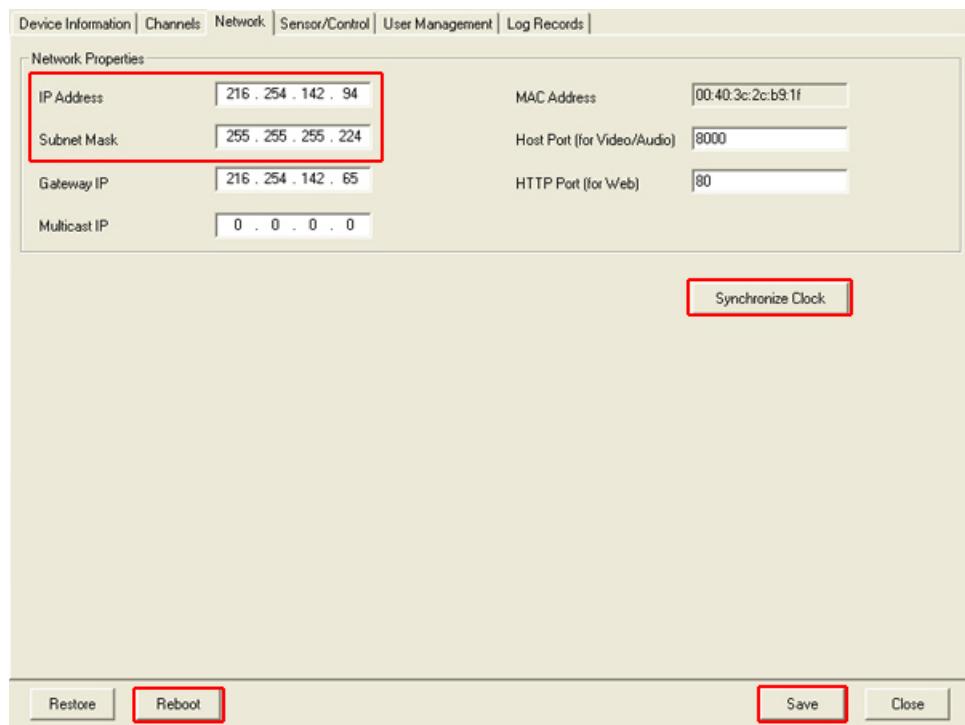
7.

Click the **Setup** button on the main screen  and Open Network setup tab

8. In the Network Setup tab, configure customer's IP settings, such as IP Address and Subnet Mask for LAN connections or IP Address, Subnet Mask, and Gateway IP for WAN connections. Multicast IP setting is currently not supported. It is entirely the responsibility of a technician to be able to configure this setup page according to customer's network configurations.

 **Warning**

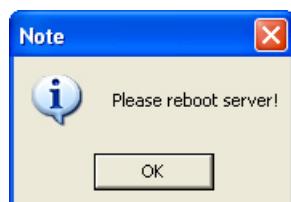
After assigning new IP address to Annexus unit, you must make a note of the new settings. Should you lose or forget the new IP settings for the Annexus unit, you will be unable to connect to it in the future.



9. Click **Save** button and wait for the “Save settings completed!” message window to pop up. Click **OK** to close the message window.



10. The “Please reboot server!” message window will pop up. Click **OK** to close the message window.



11. **Rebooting Annexxus device.**

Click the **Reboot** button and wait for the “Reboot server?” warning message window to pop up. Click **OK** to reboot Annexxus device.



12. The “Server is rebooting!” message window will pop up. Annexus 304/316 will make a beeping noise while rebooting. Click **OK** to close the message window.



13. Click the **Close** button in the Network Setup tab to close Annexus setup menu; close Internet Explorer window.

14. Wait while Annexus 301/301C/301C2M/301D2M (45 seconds) or Annexus 304/316 (25 seconds) is rebooting.

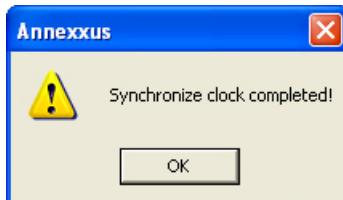
1.5.2. Synchronizing Annexus Clock

Important

Before installing the Annexus unit, it is technician's responsibility to synchronize Annexus clock via web browser application.

To synchronize the Annexus clock to Windows OS time on the local PC/laptop, do the following:

1. Follow step 3 of the previous section to open Annexus web browser. Use the new IP address previously assigned to Annexus unit in step 8.
2. Follow steps 6-7 of the previous section to log in and to open Network setup tab.
3. In the Network setup tab, click **Synchronize Clock** button.
4. Wait for the message window to pop up as shown below. Click **OK** to close the message window.



5. Repeat step 9 of the previous section
6. Repeat step 13 of the previous section
7. After completing the steps above, disconnect Annexus unit from the 24V AC power source, dedicated router/switch and from the local laptop/PC and prepare the unit for installation on customer's site.

2

Remote Connection via SRX-Pro/iP-Pro Server

Topics Covered

- Adding Annexus 301-series Video Input via Search
- Manually Adding Annexus Video Input
- Basic IP Input Setup
- Annexus Advanced Setup
- Device Information Setup
- Channels Setup
- Network Setup
- PTZ Setup
- Sensor/Control Setup
- User Management Setup
- Log Records Setup

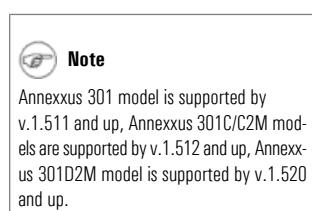
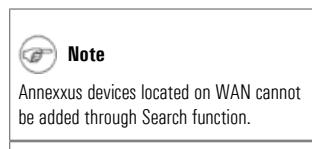
The video inputs connected to Annexus device can be added to the IP Camera setup tab of SRX-Pro/iP-Pro Server (v. 1.511 or up).

Annexus devices located on LAN/WAN can be added manually to the IP Camera setup; in addition Annexus 301 model can be automatically detected if located on LAN.

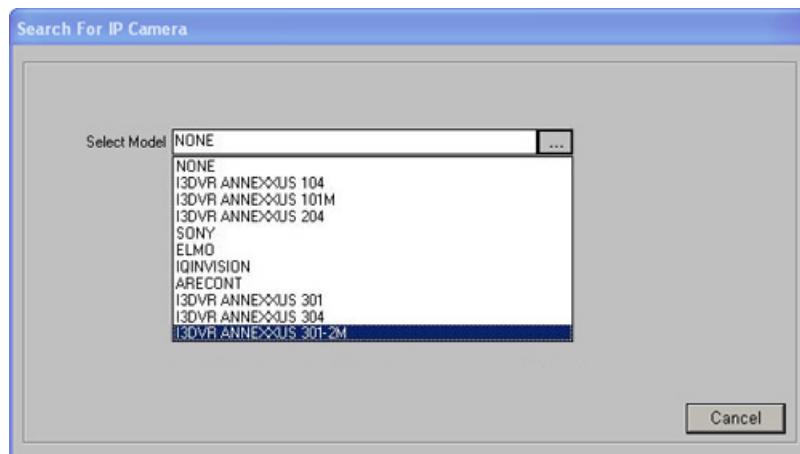
Once added to the IP Camera setup, Annexus video inputs can be assigned to SRX-Pro/iP-Pro video channels. This can be achieved in either IP Camera or Hardware Setup tabs. For more information on linking SRX-Pro/iP-Pro video channels with an IP video source, see respective software manual.

2.1. Adding Annexxus 301-series Video Input via Search

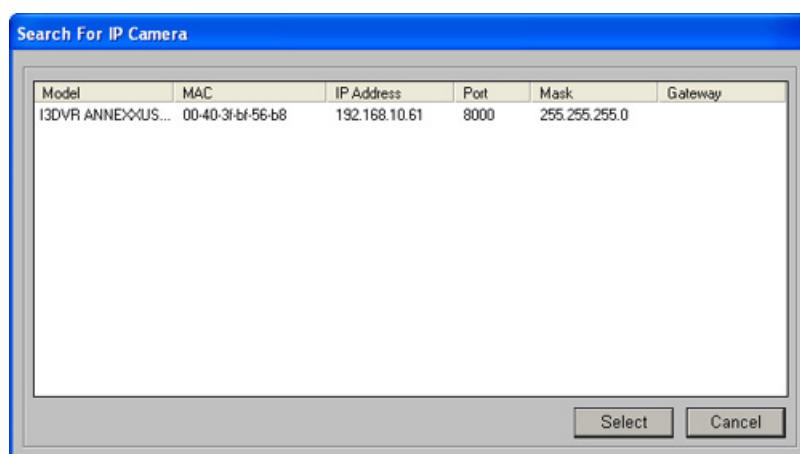
To search Annexxus 301-series (on LAN) via SRX-Pro/iP-Pro Server software, do the following:



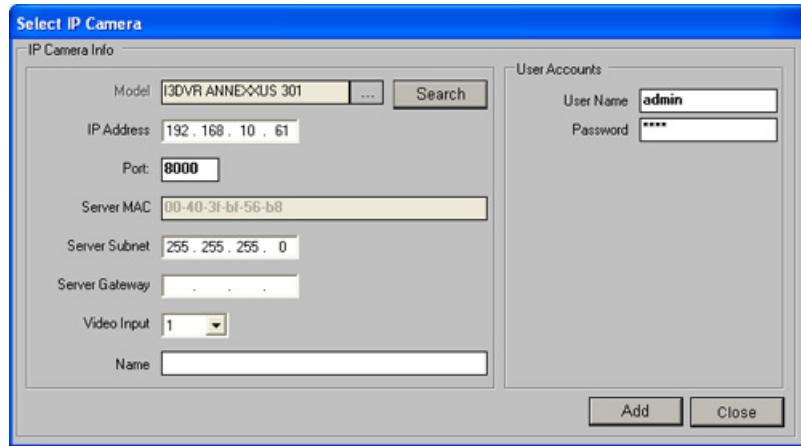
1. Click the **Setup** button on the SRX-Pro/iP-Pro main screen 
2. Select the **IP Camera** tab
3. Click the **Search** button under the live view window  **Search**
4. The **Search For IP Camera** window will be displayed on the screen. Click the **Browse** button  and select desired Annexxus model number. Choose "I3DVR ANNEXXUS 301" for Annexxus 301/301C models; Choose "I3DVR ANNEXXUS 301-2M" for Annexxus 301C2M/301D2M models.



5. The list of all available IP cameras on LAN will be displayed. The following information is available: Model, MAC address, IP Address, Port, Mask, and Gateway.
6. From the list of all displayed IP inputs, select the desired IP input and click **Select**



7. The Select IP Camera window will be displayed as shown below.



8. In the Select IP Camera window, enter the **User Name** and **Password** and click **Add**. Selected IP input will be added to the list.



Camera	IP Address	Input	Resolution	FPS	PTZ	Ch In.	Name
All Cameras							
I3DVR ANNEXUS 301	192.168.10.61 (8000)	1	704x480	1	1	NONE	2
I3DVR ANNEXUS 301	192.168.10.63 (8000)	1	704x240	1	1	NONE	1
ARECONT	192.168.10.99 (80)	1	1920x1200	1	1	NONE	7
I3DVR ANNEXUS 304							
I3DVR ANNEXUS 304	216.254.142.87 (...	1	704x240	1	1	I3DVR Z24	3
I3DVR ANNEXUS 304	216.254.142.87 (...	2	704x240	1	1	I3DVR Z24	4
I3DVR ANNEXUS 304	216.254.142.87 (...	3	704x240	1	1	I3DVR Z24	5

2.2. Manually Adding Annexus Video Input

To add Annexus video input to SRX-Pro/iP-Pro Server software, do the following:

1. In **IP Camera** setup tab, click the **Add** button under the live view window 
2. The **Add IP Camera** window will be displayed on the screen. Click the **Browse** button  and select desired Annexus model number.
3. Enter the **IP Address** of Annexus module. Changing the default port number is not recommended.
4. Enter the **User Name** and **Password**.
5. Click **Add**. The configured IP camera will be added to the list of IP cameras below.

 **Note**
Default administrator credentials are as follows: login - admin, password - 1234

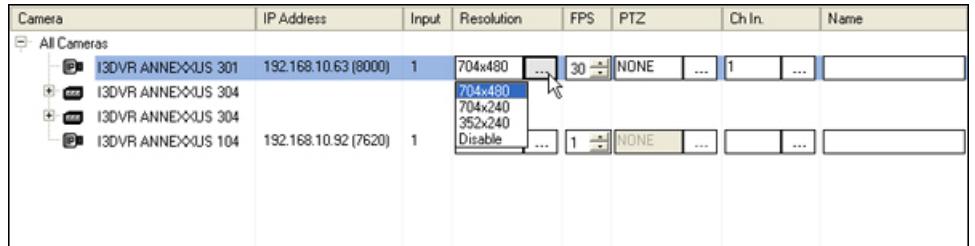
Camera	IP Address	Input	Resolution	FPS	PTZ	Ch In.	Name
All Cameras							
13DVR ANNEXUS 301	192.168.10.61 (8000)	1	704x480	1	1 NONE	2	
13DVR ANNEXUS 301	192.168.10.63 (8000)	1	704x240	1	1 NONE	1	
ARECONT	192.168.10.99 (80)	1	1920x1200	1	1 NONE	7	
13DVR ANNEXUS 304							
13DVR ANNEXUS 304	216.254.142.87 (...	1	704x240	1	1 13DVR Z24	3	
13DVR ANNEXUS 304	216.254.142.87 (...	2	704x240	1	1 13DVR Z24	4	
13DVR ANNEXUS 304	216.254.142.87 (...	3	704x240	1	1 13DVR Z24	5	

6. To edit IP input from the list, select it and click the **Edit** button 
- In the **Edit IP Camera** window, the user may change IP Address, Port number, Server Subnet, Server Gateway and User Name/Password information.
7. To delete IP input from the list, select it and click the **Delete** button .

2.3. Basic IP Input Setup

After the new IP video source has been added to the list, some parameters may be adjusted:

- **Resolution.** Choose from available resolutions: 352x240, 704x240, 704x480, 1280x720 (Annexus 301C2M/301D2M only) and 1600x1200 (Annexus 301C2M/D2M only).



- **FPS** (frames-per-second rate). This frame rate setting is used for recording. This frame rate is also used on Live Mode, while IP input is in the full screen mode. When any other screen division is selected, IP input will be displayed at 2 fps rate on live mode.

Use the arrows up/down to increase/decrease frame rate setting. Use the table below to determine the FPS range depending on set resolution and video frequency.

Supported FPS Range based on Resolution and Video Frequency

Resolution	Video Frequency	FPS Range
CIF (352x240)	60 Hz	1 ~ 30 fps
CIF (352x288)	50 Hz	1 ~ 25 fps
2CIF (704x240)	60 Hz	1 ~ 30 fps
2CIF (704x288)	50 Hz	1 ~ 25 fps
D1 (704x480)	60 Hz	1 ~ 30 fps
D1 (704x576)	50 Hz	1 ~ 25 fps
1280x720	60 Hz	1 ~ 15 fps
1280x720	50 Hz	1 ~ 25 fps
1600x1200	60 Hz	1 ~ 10 fps
1600x1200	50 Hz	1 ~ 12 fps



Tip

Frame rate can be set to less than 1 frame per second in Channels Setup of Annexus Advanced Setup.

The FPS setting for each Annexus 301-series channel may not exceed 30 frames-per-second (with Only P frame type).

Annexus 301/301C Limitations with SRX-Pro/iP-Pro Server:

- BBP frame type setting (default) allows one camera input with a maximum of 10 fps per input regardless of the resolution setting.
- Only P frame type setting allows one camera input with a maximum of 30 fps per input regardless of the resolution setting.

Annexus 304 Limitations with SRX-Pro/iP-Pro Server:

- 352x240 allows four camera inputs with a maximum of 10 fps per input

- 704x240 allows four camera inputs with a maximum of 10 fps per input
- 704x480 allows two camera inputs with a maximum of 10 fps per input



Note

Web browser application for Annexus 304 and AX316 supports up to 30 fps per input.

- **PTZ** protocol for cameras connected to the IP module. The drop-down menu only becomes enabled which the IP source is assigned to the Channel Input.
- **Channel Input.** Each IP input can be linked to any number of video channels, but each channel can be linked to only one IP input at-a-time. Video channels can also be linked to IP inputs in the Hardware Setup tab.
- Customer **Name** for the IP input (optional).

Click the **Save** button after adjusting any parameters.



2.4. Annexus Advanced Setup

To change additional Annexus settings, select one of the Annexus inputs in the All Cameras list and click **Advanced Setup** button in the Selected Camera Info frame. The **Advanced Setup** window will be displayed as shown below:

 Note
The same Advanced Setup can be accessed through Annexus web browser application via Internet Explorer. See the related section for more information.
 Tip
To prevent unauthorized users from making changes to the device's settings, configure additional operators in the User Management setup tab and disable Save Settings option.

Seven (7) main setup tabs are available: Device Information, Channels, Network, PTZ (Annexus 301/304/316 only), Sensor/Control, User Management and Log Records.

In the bottom of each setup window there are four control buttons: **Restore**, **Reboot**, **Save** and **Close**.

Restore button is available to authorized users only; restores the Annexus device settings to factory default. Settings must be restored to factory default after each firmware upgrade. **WARNING:** All custom settings will be lost, including any additional users.

Reboot button is available to authorized users only; reboots Annexus device when pressed. Device reboot is required after the video recording settings have been changed or after the firmware upgrade. Read related section for instructions on rebooting the device.

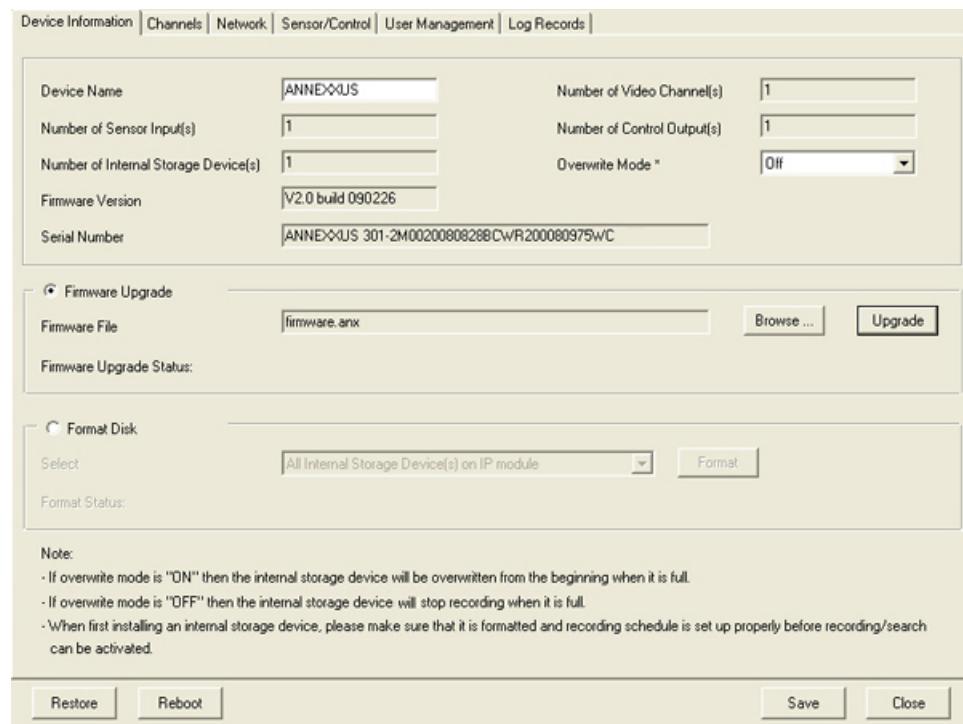
Save button is available to authorized users only; saves any setting changes when pressed. To prevent unauthorized users from making changes to the Annexus device, disable the Save button in the User Management setup tab.

Close button closes the Advanced Setup window.

2.5. Device Information Setup

In the Device Information Setup, the following information can be obtained about the Annexxus device: number of video channels, number of sensor inputs, number of control outputs, number of internal storage devices, device current firmware version, and device serial number.

The authorized users can also assign/change customer device name, change the overwrite mode (applicable models only), upgrade the device's firmware version, and format internal storage device (applicable models only).



The screenshot shows the 'Device Information' setup page with the following details:

- Device Name:** ANNEXXUS
- Number of Video Channel(s):** 1
- Number of Sensor Input(s):** 1
- Number of Control Output(s):** 1
- Number of Internal Storage Device(s):** 1
- Overwrite Mode:** Off
- Firmware Version:** V2.0 build 090226
- Serial Number:** ANNEXXUS 301-2M00200808288CwR200080975wC

Firmware Upgrade:

- Firmware Upgrade
- Firmware File:** firmware.anx
- Upgrade:** Browse ...

Format Disk:

- Format Disk
- Select:** All Internal Storage Device(s) on IP module
- Format:** Format

Note:

- If overwrite mode is "ON" then the internal storage device will be overwritten from the beginning when it is full.
- If overwrite mode is "OFF" then the internal storage device will stop recording when it is full.
- When first installing an internal storage device, please make sure that it is formatted and recording schedule is set up properly before recording/search can be activated.

Buttons: Restore, Reboot, Save, Close

Device Name

In the Device Name, enter the custom name for the connected Annexxus device.

Overwrite Mode

Overwrite mode is only applicable to the Annexxus models that support the internal storage device (SD card/USB storage). Currently, only Annexxus 301C and 301C2M support internal video recording.

Set the Overwrite Mode to **ON** to overwrite older video recording once the internal storage drive becomes full.

Set the Overwrite Mode to **OFF** to stop video recording to the internal storage drive once it fills up.

Note

All new internal storage devices (SD cards/USB storage) must be formatted before being connected to the Annexxus device.

Firmware Upgrade

This function is only available to authorized users. Read Upgrading Firmware section for instructions on how to upgrade Annexxus device firmware.

Format Disk

This function is only available to authorized users.

! **Warning**

Formatting internal storage drive will erase
ALL video recording.

To format an internal storage device, do the following:

1. Select the **Format Disk** radio button to enable the **Select** drop-down menu
2. In the drop-down menu, select the internal storage device to be formatted
3. Click **Format**. Format Status message will change to "Formatting storage device"
4. Wait while the drive is being formatted. The format status message will change to "Formatting completed on storage device".



2.6. Channels Setup

In the Channels Setup, the authorized users can perform the following tasks for each selected video channel:

Important

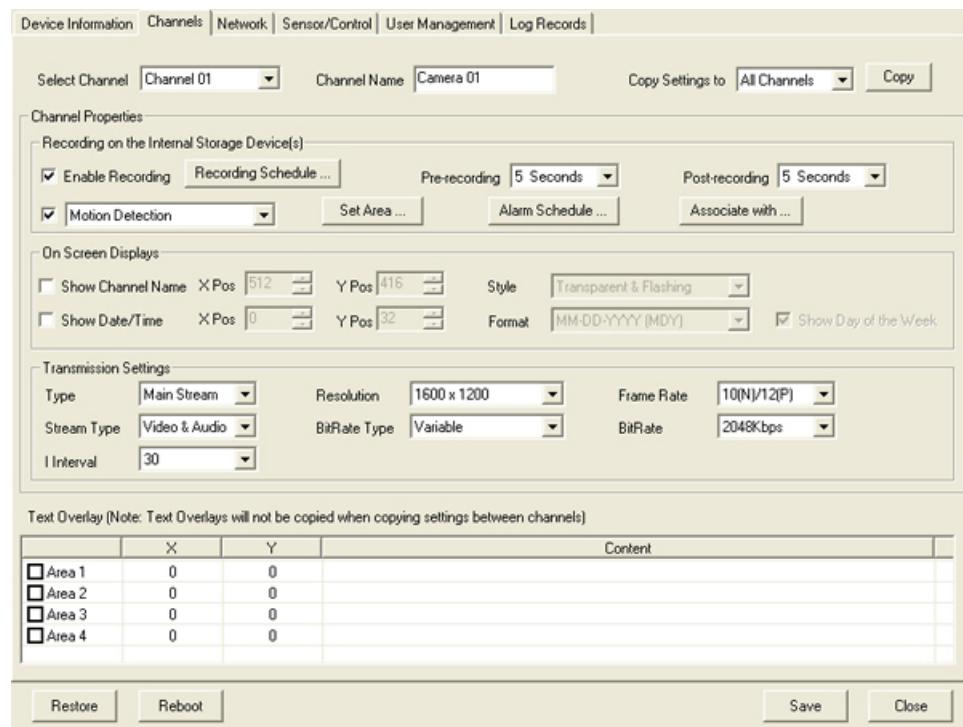
Any setting configurations pertaining to the video recording and video recording schedule affect the internal storage device recording only. Transmission settings (Stream Type, Interval, BitRate Type, Bit Rate, Resolution and Frame rate) affect video streaming and SRX-Pro/iP-Pro video recording.

- Assign/change channel name
- Display/hide channel name, change the position of the channel name on the video screen
- Display/hide timestamp and day of the week; change the position of the timestamp on the video screen; change the display style of the timestamp if enabled.
- Display/hide up to 4 personalized text messages on the video screen (text overlay)
- Enable/disable video recording (to the internal storage device only)
- Configure video recording schedule (to the internal storage device only)
- Configure pre- and post-recording time (to the internal storage device only)
- Enable motion detection, set motion detection area(s), associate motion with control output and/or other channel recording (internal storage device recording only)
- Enable video loss detection, associate video loss with control output(s)
- Enable view tampering detection, set view tampering area, associate view tampering with control output(s)
- Enable video privacy masking, set up to 4 video privacy masking areas
- Toggle between Video or Video&Audio stream types
- Change the display and recording resolution for the main and sub video streams.

Note: Main Stream is recorded onto the internal storage device, DVMS or NVR; Sub Stream is used for remote viewing via Internet Explorer only.

- Change the display and recording frame rate for the main and sub video streams
- Change other transmission settings: Interval, BitRate Type, BitRate, and Frame Type (Annexxus 301/301C only). These settings will affect the quality of the video recorded onto internal storage device as well as DVMS/NVR.

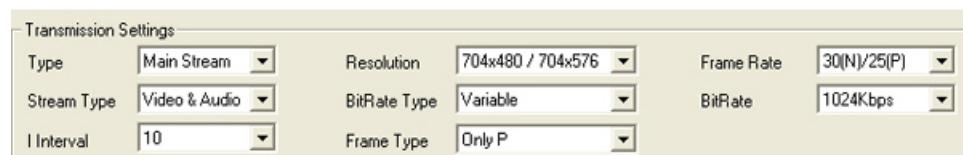
All the settings above can be configured for a single channel and then copied over to other or all video channels connected to Annexxus device (applicable to Annexxus 304/316 only). Therefore, start any setup configuration by selecting the video channel from the **Select Channel** drop-down menu.



2.6.1. Video Settings Setup

Each Annexxus device supports dual streaming: main stream and sub stream. All transmission variables such as stream type, video resolution, frame rate, bit rate type, bit rate, I Interval (except Annexxus 304 and Annexxus 316) and frame type (if applicable) can be configured separately for main and sub streams.

Main stream is used for recording, while sub stream can be used for faster remote viewing. To take full advantage of the dual streaming, it is recommended to set main stream to higher resolution and lower frame rate, and sub stream to lower resolution and higher frame rate. This allows for a much faster remote viewing, while a high-quality video image is still being recorded to the DVMS/NVR system and/or to the internal storage device.



To configure Annexxus Main Stream, do the following:

1. From the **Type** drop-down menu, select **Main Stream**
2. From the **Stream Type** drop-down menu, select **Video & Audio** to stream and record both video and audio inputs or **Video** to stream video input only or if audio input is not available.
3. For Annexxus 301, 301C, 301CP models, select **Only P** or **BBP** from the **Frame Type** drop-down menu. Note that the Frame Type for Annexxus 304, 316, 301C2M and 301D2M is pre-set and cannot be changed by the user.

Caution
Only P setting allows Annexxus unit to support up to 30 fps per channel; BBP setting limits the maximum frame rate to 10 fps per channel.
Tip
I-Interval change will not affect the Frame Type setting.

4. From the **I Interval** drop-down menu, set the **I Interval**. Use the table below to determine the recommended *I-Interval* value based on Annexxus model and Frame Type.

I-Interval Recommended Value depending on Annexxus model and Frame Type.

Annexxus model	Frame Type	I-Interval Recommended Value
Annexxus 301	BBP/Only P, selectable	30 (BBP)/10 (Only P), selectable
Annexxus 301C/CP	BBP/Only P, Selectable	30 (BBP)/10 (Only P), selectable
Annexxus 304	BBP, fixed	100, fixed
Annexxus 316	BBP/Only P, selectable	30 (BBP)/10 (Only P), selectable
Annexxus 301C2M	Only P, fixed	10, selectable
Annexxus 301D2M	Only P, fixed	10, selectable

There are three types of frames used in video compression: I-frames, P-frames, and B-frames. An *I-frame* ("intra-coded picture") is an uncompressed image frame, which takes up the most hard drive space. P-frames and B-frames hold only part of the image information, which means they use less hard drive space.

I-Interval determines how many *I-frames* are recorded in a given number of frames. For example, if the *I-Interval* is set to 30, one *I-frame* will be recorded every 30 frames, improving the video compression rate. If the *I-Interval* is set to 5, one out of each 5 frames is going to be an *I-frame*.

Therefore, the higher the *I-Interval* number, the higher the video compression and the smaller the video recording size; the lower the *I-Interval* number, the lower the video compression and the larger the video recording size.

5. From the **Resolution** drop-down menu, select one of the supported resolutions (QCIF, CIF, 2CIF, D1, 1280x720, 1600x1200). Remember that the chosen resolution will affect the available frame rate settings. The higher the resolution, the higher the image clarity and definition and the higher the video recording size. Use the table below to determine the frame size based on the resolution and Annexxus model.

Annexxus Frame Size Depending on Annexxus Model and Video Resolution

Annexxus Device Model	Video Resolution	Frame Size
Annexxus 301/C	352x240/352x283.12 KB/frame	
Annexxus 301/C	704x240/704x283.7 KB/frame	
Annexxus 301/C	704x480/704x578.7 KB/frame	
Annexxus 304	352x240/352x283.33 KB/frame	
Annexxus 304	704x480/704x576.43 KB/frame	
Annexxus 316	352x240/352x283.12 KB/frame	
Annexxus 316	704x240/704x283.7 KB/frame	
Annexxus 316	704x480/704x578.7 KB/frame	
Annexxus 301C2M	1600x1200	25.515 KB/frame

6. From the **Frame Rate** drop-down menu, select the frame rate for the selected video channel. Available Frame Rate options as well as the maximum FPS depends on the video frequency and resolution. Use the table below to determine what frame rate options are available based on the configured resolution and video frequency (NTSC/PAL). Frame rate settings of less than 1 frame will be displayed as 1 in SRX-Pro/iP-Pro setup.

Available FPS based on Resolution and Video Frequency

Resolution	Video Frequency	Available FPS Options
------------	-----------------	-----------------------

CIF (352x240)	60 Hz (NTSC)	1/16, 1/8, 1/4, 1/2, 1, 2, 4, 6, 8, 10, 12, 15, 16, 18, 20, 22, 30
CIF (352x288)	50 Hz (PAL)	1/16, 1/8, 1/4, 1/2, 1, 2, 4, 6, 8, 10, 12, 15, 16, 18, 20, 22, 25
2CIF (704x240)	60 Hz (NTSC)	1/16, 1/8, 1/4, 1/2, 1, 2, 4, 6, 8, 10, 12, 15, 16, 18, 20, 22, 30
2CIF (704x288)	50 Hz (PAL)	1/16, 1/8, 1/4, 1/2, 1, 2, 4, 6, 8, 10, 12, 15, 16, 18, 20, 22, 25
D1 (704x480)	60 Hz (NTSC)	1/16, 1/8, 1/4, 1/2, 1, 2, 4, 6, 8, 10, 12, 15, 16, 18, 20, 22, 30
D1 (704x576)	50 Hz (PAL)	1/16, 1/8, 1/4, 1/2, 1, 2, 4, 6, 8, 10, 12, 15, 16, 18, 20, 22, 25
1280x720	60 Hz (NTSC)	1, 2, 4, 6, 8, 10, 12, 15
1280x720	50 Hz (PAL)	1, 2, 4, 6, 8, 10, 12, 15, 16, 18, 20, 22, 25
1600x1200	60 Hz (NTSC)	1, 2, 4, 6, 8, 10
1600x1200	50 Hz (PAL)	1, 2, 4, 6, 8, 10, 12

 **Tip**

$\frac{1}{2}$ fps means that 1 frame will be recorded every 2 seconds, $\frac{1}{4}$ - 1 frame every 4 seconds, etc. Frame rates less or equal to 4 frames-per-second are recommended when recording at 1600x1200 resolution.

7. From the **BitRate** drop-down menu select the maximum transmission bit rate. Note that higher image resolutions require higher bit rate. Use the table below to determine the recommended maximum bit rate based on the resolution.

If the maximum Bit Rate is set to a lower value than required by configured resolution, the framerate will be maintained and the resolution will be reduced. For example, if the Maximum Bit Rate is set to 768Kbps, while resolution is set to 1600x1200, Annexxus module will continue sending video at the set frame rate, but the resolution will be automatically lowered.

Recommended Maximum Bit Rate based on Resolution

Resolution	Recommended Max. Bit Rate
CIF (352x240/352x288)	512 Kbps
2CIF (704x240/704x288)	768 Kbps
D1 (704x480/704x576)	1024 Kbps
1280x720	1536 Kbps
1600x1200	2048 Kbps

8. From the **BitRate Type** drop-down menu select either **Variable (recommended)** or **Fixed** BitRate type.

Variable bit rate type will continuously transmit video image, even when the available bit rate will fall below the configured bit rate value (due to higher than normal network traffic, for example). If the bit rate type is set to *Fixed*, no video image will be transmitted when the available bit rate falls below configured bit rate value.

To configure the Sub Stream settings, select **Sub Stream** from the **Type** drop-down menu and then repeat steps 2-8 above. Since sub video streaming is usually used to view the video faster over the Internet, it is recommended to set the sub stream frame rate to higher values, while keeping the resolution setting low: QCIF or CIF.

	Recommended Resolution Setting	Recommended FPS Setting

Main Stream	2CIF, D1, 1280x720, 1600x1200	1 ~ 10 fps
Sub Stream	QCIF, CIF	25 fps (PAL)/30 fps (NTSC)

See Live Video and Audio Streaming section for more information.

2.6.2. Video Recording Schedule Setup

Enable video recording onto the Annexus *internal storage device* by checking off **Enable Recording** checkbox. Note that this checkbox is only enabled when a formatted SD card is inserted into the SD-card slot on the Annexus 301/304 device. In addition, the Annexus 316 does not have an SD-card slot available; however, it does have the capability to attach an optional eSATA hard drive for additional storage. For all other Annexus models that do not support internal video storage, or do not have an internal storage device available, this setup section will be disabled.

Four Types of video recording are available: Continuous, Motion, Alarm (Sensor) and Motion & Alarm.

Continuous recording will record all video, regardless of whether there is any on-screen activity or not. This type of video recording takes up the most storage space on the internal storage device.

Motion recording will record video only when motion is detected on the selected channel. This type of video recording records only relevant video when there is on-screen activity. Motion recording helps save internal storage space and allows storing video for longer periods of time before it is overwritten.

Important: For the Motion recording to work properly, Annexus Motion detection must be configured first. Please read Motion Detection Setup section for instructions.

Alarm (Sensor) recording will record video only based on detected alarm. This type of video recording records only when a connected sensor(s) is/are triggered. Alarm recording helps save internal storage space and allows storing video for longer periods of time before it is overwritten.

Motion and Alarm recording is a combination of Motion recording and Alarm recording. This type of video recording records whenever motion or a triggered sensor are detected.

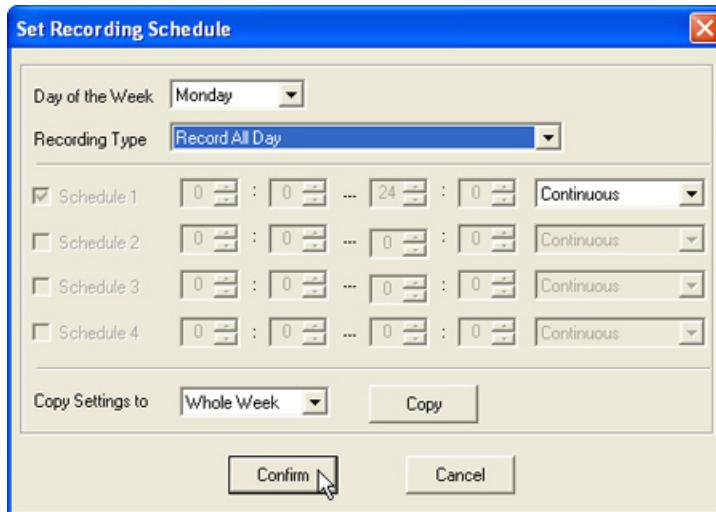
Click **Recording Schedule...** button to configure the recording schedule. *Set Recording Schedule* window will be displayed. The recording schedule can be configured for each day of the week. Furthermore, up to 4 individual time frames can be configured for each daily recording schedule.



See Device Information Setup section for the Overwrite Mode settings.

2.6.2.1. Daily Recording Schedule

1. Select **Day of the Week** from the drop-down menu to create a weekly recording schedule for the selected day.
2. Select **Record All Day** from the **Recording Type** drop-down menu to apply the same type of schedule to the entire day.
3. Select the type of recording schedule from the drop-down menu: Continuous, Motion, Alarm, Motion & Alarm.



4. To copy the same recording schedule to other days of the week, select the desired option in the **Copy Settings to** drop-down menu and click **Copy**. Repeat for other days of the week if desired.
5. Click **Confirm** to save the configured recording schedule and to close *Set Recording Schedule* window.
6. Click **Save** to save the new schedule.

2.6.2.2. Time frame Recording Schedule

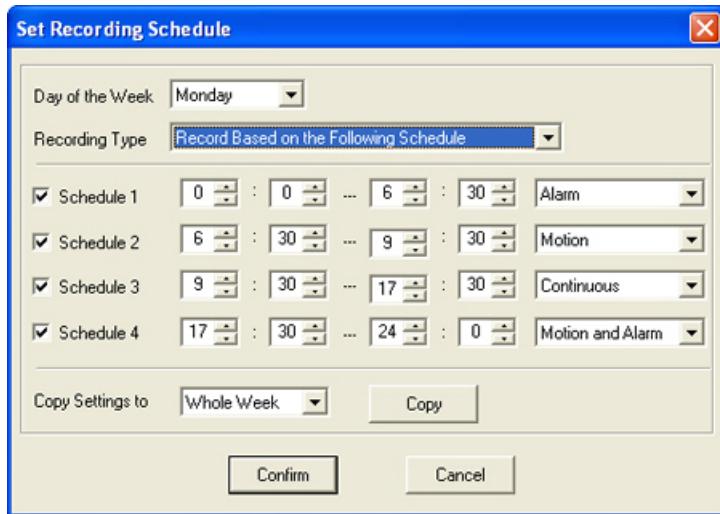
1. Select **Day of the Week** from the drop-down menu to create a weekly recording schedule for the selected day.
2. Select **Record Based on the Following Schedule** from the **Recording Type** drop-down menu to configure up to 4 different time frames.
3. Enable up to four (4) schedules. Each schedule can be assigned its specific Time frame and its own recording schedule type.

Important

Remember that the time frames may not overlap or be repeated. Use military time format to configure the time frames. E.g. 22 = 10PM.

In the Example below, the selected video channel will record as follows:

- From 12:00AM until 6:30AM - based on detected Alarm(Sensor) activity
- From 6:30AM until 9:30AM - based on detected Motion
- From 9:30AM until 5:30PM - based both on detected Motion and Alarm(Sensor) activity
- From 5:30PM until 12:00AM - continuous recording



4. To copy the same recording schedule to other days of the week, select the desired option in the **Copy Settings to** drop-down menu and click **Copy**. Repeat for other days of the week if desired.
5. Click **Confirm** to save the configured recording schedule and to close *Set Recording Schedule* window.
6. Click **Save** to save the new schedule.

2.6.2.3. Pre- and Post- Alarm Recording

Pre- and post- recording times affect the Motion and Alarm type of video recordings. Annexxus module will record for the number of seconds specified prior to and after the sensor is triggered or the detected motion has stopped. The pre-recording length may not exceed 30 seconds since it is continually stored in the Annexxus module's buffer, while post-recording can be set to up to 10 minutes.

In the example below, Annexxus module will record video 5 seconds prior to the sensor activation or motion detection and will stop recording 5 minutes after the sensor has been triggered or 5 minutes after the motion has stopped.



Note that this setup is only enabled when a formatted SD card is inserted into the SD-card slot on the Annexxus 301C/301C2M device. For all Annexxus models that do not support internal video storage or do not have an internal storage device available, this setup section will be disabled.

2.6.3. Motion Detection Setup

Annexxus modules, in addition to SRX-Pro/iP-Pro Server have their own independent motion detection setup. Annexxus module can be configured to record video and/or trigger control outputs in response to detected motion. When motion detection is properly configured, alarm logs will also be generated and stored by Annexxus module whenever motion has been detected.

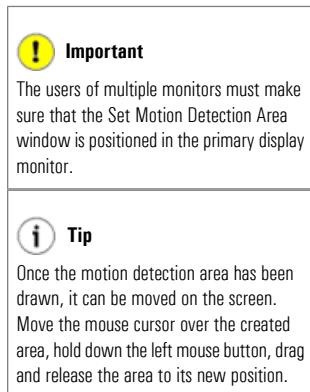
Note that this setup will be enabled for all Annexxus modules, even when internal storage devices are not supported or not available. In this case, no internal video recording will take place and no alarm logs will be generated, however the detected motion can still be associated with a control output.

To configure Annexxus Motion Detection, do the following:

1. Enable motion detection by first selecting Motion Detection from the drop-down menu and then checking off the checkbox located to the left of the menu (see image below).



2. Configure motion detection area(s). Click **Set Area...**. The *Set Motion Detection Area* window will be displayed.



3. Draw the motion detection area by first positing the mouse cursor at the starting position, then hold down the left mouse button and drag the mouse cursor until the desired area is covered. The grid will be displayed over the selected area (see image below). The video image is divided into blocks and any number of those blocks can be selected for motion detection.



4. To select additional area(s) for motion detection, repeat Step 3.
5. To delete motion detection area(s) and start over, click **Clear** and repeat step 3 until all motion detection areas are defined.
6. After the motion detection areas are drawn, configure the detection sensitivity by dragging the **Sensitivity** slider to the right/left, to increase/decrease the motion detection sensitivity. Reduce the sensitivity to bring the number of false alarms to a minimum. It is up to the user to test this function to find the best sensitivity level, which works for each specific installation.
7. Click **Confirm** to save motion detection areas and apply the settings.
8. Click **Save** to save the new settings.

2.6.3.1. Motion Detection Schedule

Annexus Motion detection can be limited by a user schedule. By configuring the motion detection schedule, the user can select specific days and/or times when the video channel will be monitored for motion activity. For example, the warehouse manager may choose to monitor motion in the warehouse during the after hours or during low/high traffic hours only.

Just like Video Recording, Motion detection schedule can be configured for each day of the week. Furthermore, up to 4 individual time frames can be configured for each daily motion detection schedule.

To configure Motion Detection schedule, do the following:

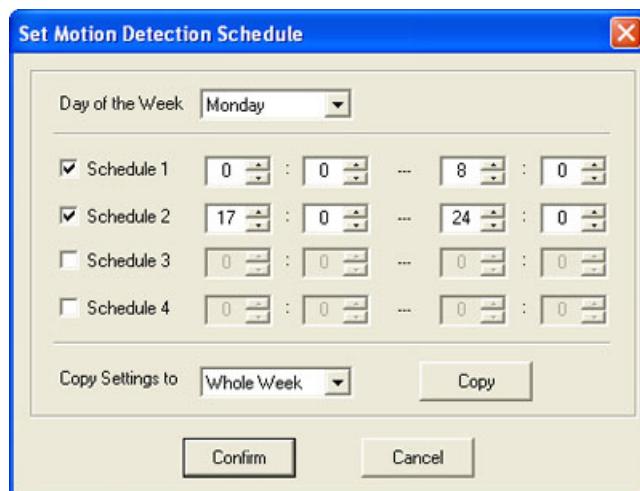
1. Click **Alarm Schedule...** The *Set Motion Detection Schedule* window will be displayed.
2. Select **Day of the Week** from the drop-down menu to create a weekly motion detection schedule for the selected day.
3. Enable up to four (4) schedules. Each schedule can be assigned its specific Time frame.

Important

Remember that the time frames may not overlap or be repeated. Use military time format to configure the time frames. E.g. 22 = 10PM.

In the Example below, the motion on the selected video channel will be enabled:

- From 12:00AM until 8:00AM and
- From 5:00PM until 12:00AM



- To copy the same motion detection schedule to other days of the week or to the entire week, select the desired option in the **Copy Settings to** drop-down menu and click **Copy**. Repeat for other days of the week if desired.
- Click **Confirm** to save the configured motion detection schedule and to close *Set Motion Detection Schedule* window.
- Click **Save** to save the new schedule.

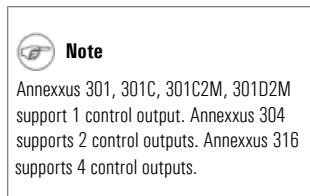
2.6.3.2. Associate Motion Detection with Control Output

In addition to being able to record video and to generate alarm logs based on motion detection, it is also possible to associate motion detected on the selected channel with one or more control outputs.

To link Motion Detection to one or more control outputs, do the following:

1. Click **Associate With...** Motion detection window will be displayed.
2. Check off **Check Mark to Activate Control Output:** checkmark
3. Check off the desired control Output(s).

Important: Control outputs must be properly connected to the Annexus module and must use their own power supply. Furthermore, all control outputs must be also configured in the Sensor/Control setup tab, where Control Schedule and Control Output Time can be assigned to each control output.



4. Click **Save** to save the new settings.

2.6.4. Video Loss Setup

Annexus module can be configured to detect video loss and trigger control outputs in response to detected video loss. When video loss detection is properly configured, alarm logs will also be generated and stored by Annexus module whenever video loss been detected.

Note that this setup will be enabled for all Annexus modules, even when internal storage devices are not supported or not available. In this case, no alarm logs will be generated, however the detected video loss can still be associated with a control output.

To configure Video Loss detection, enable video loss detection by first selecting Video Loss from the drop-down menu and then checking off the checkbox located to the left of the menu (see image below).



2.6.4.1. Video Loss Detection Schedule

Annexus Video Loss detection can be limited by a user schedule. By configuring the video loss detection schedule, the user can select specific days and/or times when the video channel will be monitored for video loss. It is, however, recommended to monitor video loss at all times.

To configure video loss detection schedule, follow instruction in Motion Detection Schedule section.

2.6.4.2. Associate Video Loss Detection with Control Output

In addition to being able to generate alarm logs based on video loss detection, it is also possible to associate video loss detected on the selected channel with one or more control outputs.

To associate video loss with one or more control outputs, follow instruction in Associate Motion Detection with Control Output section.

2.6.5. View Tampering Setup

Annexus module can be configured to detect camera view tampering and trigger control outputs in response. View Tampering detects signs of potential vandalism to the camera by detecting view tampering whenever an object appears too close to the camera lens. When view tampering detection is properly configured, alarm logs will also be generated and stored by Annexus module whenever view tampering has been detected.

Note that this setup will be enabled for all Annexxus modules, even when internal storage devices are not supported or not available. In this case, no alarm logs will be generated, however the detected view tampering can still be associated with a control output.

To configure Annexxus View Tampering Detection, do the following:

1. Enable view tampering detection by first selecting View Tampering from the drop-down menu and then checking off the checkbox located to the left of the menu (see image below).



2. Configure view tampering detection area. Click **Set Area...** The *Set View Tampering Area* window will be displayed.
3. Draw the view tampering area by first positing the mouse cursor at the starting position, then hold down the left mouse button and drag the mouse cursor until the desired area is covered. A white box will be displayed over the selected area (see image below).

Important
The users of multiple monitors must make sure that the Set View Tampering Area window is positioned in the primary display monitor.



4. To delete view tampering detection area and start over, click **Clear** and repeat step 3
5. After the view tampering detection area is drawn, configure the detection sensitivity by dragging the **Sensitivity** slider to the right/left, to increase/decrease the view tampering detection sensitivity. Reduce the sensitivity to bring the number of false alarms to a minimum. It is up to the user to test this function to find the best sensitivity level, which works for each specific installation.
6. Click **Confirm** to save view tampering detection area and apply the settings
7. Click **Save** to save the new settings.

2.6.5.1. View Tampering Detection Schedule

Annexxus View Tampering Detection can be limited by a user schedule. By configuring the view tampering detection schedule, the user can select specific days and/or times when the video channel will be monitored for view tampering. It is, however, recommended to monitor view tampering at all times.

To configure view tampering detection schedule, follow instruction in Motion Detection Schedule section.

2.6.5.2. Associate View Tampering Detection with Control Output

In addition to being able to generate alarm logs based on view tampering detection, it is also possible to associate view tampering detected on the selected channel with one or more control outputs.

To associate view tampering with one or more control outputs, follow instruction in Associate Motion Detection with Control Output section.

2.6.6. Privacy Masking Setup

Annexus module allows creating up to 4 privacy masking areas for each connected video channel. One of the example applications of this feature would be blocking the teller monitors in the bank if they come in the camera view in order to protect bank customer privacy.

Note that once the privacy mask areas are configured and set, the portion of the video covered by the privacy mask is lost and cannot be restored or retrieved after the fact.

Note that this setup will be enabled for all Annexus modules, even when internal storage devices are not supported or not available. In this case, live video and video recorded by SRX-Pro/iP-Pro Server will be affected by this privacy mask settings

To configure Annexus Privacy Mask, do the following:

1. Enable privacy masking by first selecting Privacy Mask from the drop-down menu and then checking off the checkbox located to the left of the menu (see image below).



2. Configure privacy masking area(s). Click **Set Area...** The *Set Privacy Mask Area* window will be displayed.
3. Draw the privacy masking area by first positing the mouse cursor at the starting position, then hold down the left mouse button and drag the mouse cursor until the desired area is covered. The white box will be displayed over the selected area (see image below). The video image covered by the white box will be irreversibly lost and will not be retrieved.

Important

The users of multiple monitors must make sure that the Set Privacy Mask Area window is positioned in the primary display monitor.

Tip

Once the privacy masking area has been drawn, it can be moved on the screen. Move the mouse cursor over the created area, hold down the left mouse button, drag and release the area to its new position.



4. To draw additional privacy area(s), repeat Step 3 for a total of up to 4 privacy masking areas.
5. To delete motion detection area(s) and start over, click **Clear** and repeat step 3 until all privacy mask areas are drawn.
6. Click **Confirm** to save privacy mask areas and apply the settings
7. To delete privacy mask area(s) and start over, click **Clear** and repeat step 3.
8. Click **Save** to save the new settings.

2.6.7. On Screen Displays Setup

The following information can be overlaid on top of each video stream: channel name, day of the week, time stamp (year, month, date, time).

To configure Channel Name, type the channel custom name inside the Channel Name box.



To display the custom Channel Name on the video screen, check off **Show Channel Name** checkbox. The custom channel name will be displayed in either white or black solid color depending on the predominant background color.

To change the Channel Name position on the screen, adjust the X and Y values. By default, the custom channel name is placed in the bottom right-hand corner.



To display the timestamp on the video screen, check off **Show Date/Time** checkbox. To display the day of the week, check off **Show Day of the Week** checkbox.

Important

Click Save to apply any setting changes.

In the **Format** drop-down menu select the desired timestamp format: YYYY-MM-DD, MM-DD-YYYY, or DD-MM-YYYY.

In the **Style** drop-down menu select the desired style for the timestamp display: Transparent & Flashing, Transparent & Steady, Opaque & Flashing, Opaque & Steady. The time stamp will be displayed in a contrasting color depending on the predominant background color (see image below).



To achieve the on screen display above, the Channel Name was set to "South Corner", Channel Name display and Date/Time/Day of the Week displays were enabled. Time stamp format was set to DD-MM-YYYY and the style was set to Opaque & Steady.

2.6.7.1. Custom Text Overlay

In addition to the Date/Time stamp and the Channel Name on-screen-displays, each video channel can have up to 4 lines of custom text.

To add custom text overlay to the Annexus video channel, do the following:

1. Enable up to 4 different text areas by checking off one or more check boxes in the Text Overlay area of the Channels setup tab.
2. Enter X and Y positions to set the new text position on the screen
3. Position the mouse cursor over the **Content** line corresponding to the enabled text overlay area. Left-click inside the **Content** line and type the new text.

In the example below, three additional text lines have been added to the video display: "Annexus 301C2M Camera", "Please monitor continuously", and "Tel: 1.877.877.7241".

4. Click **Save** to save the new settings.

 Note
When copying settings between video channels (Annexus 304/316), text overlay settings will not be copied.

Text Overlay (Note: Text Overlays will not be copied when copying settings between channels)			
	X	Y	Content
<input checked="" type="checkbox"/> Area 1	20	400	Annexus 301C2M Camera
<input checked="" type="checkbox"/> Area 2	20	416	Please monitor continuously
<input checked="" type="checkbox"/> Area 3	40	64	Tel: 1.877.877.7241
<input type="checkbox"/> Area 4	0	0	



2.7. Network Setup

RJ-45 Network Port on the Annexxus-series device allows it to be connected to an Ethernet/Fast Ethernet standard (10/100Base-TX) network, complying with the IEEE 802.3U standard. Annexxus device may be connected to a hub, switch or router with a straight through CAT5e cable, or directly to the DVR/NVR with a crossover CAT5e cable.

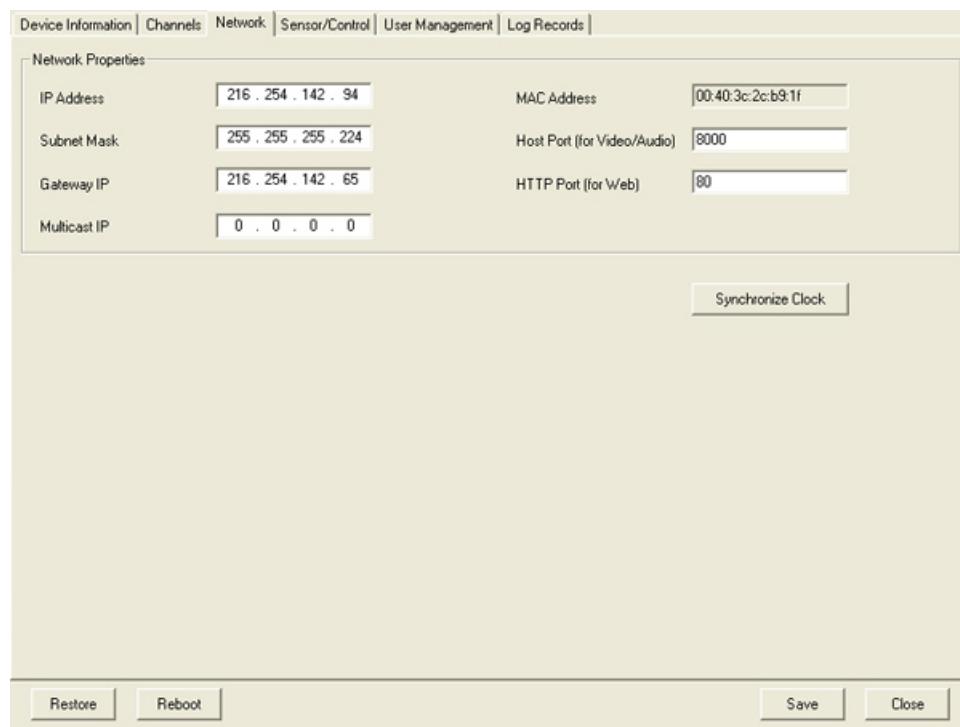
See Annexxus Default IP Configurations section for information on Annexxus factory default IP configurations.

In the Network Setup, the authorized users can obtain the device's MAC Address and/or change the Annexxus device IP Address, Subnet Mask, Gateway IP, Multicast IP (currently not supported), Host Port (for Video/Audio) and/or HTTP Port (for Web access). Please contact your network administrator for more information on your network particulars.

Important: Make sure to open all ports required for viewing Annexxus Device remotely. The following ports must be forwarded: 80, 554, 8000, 8200

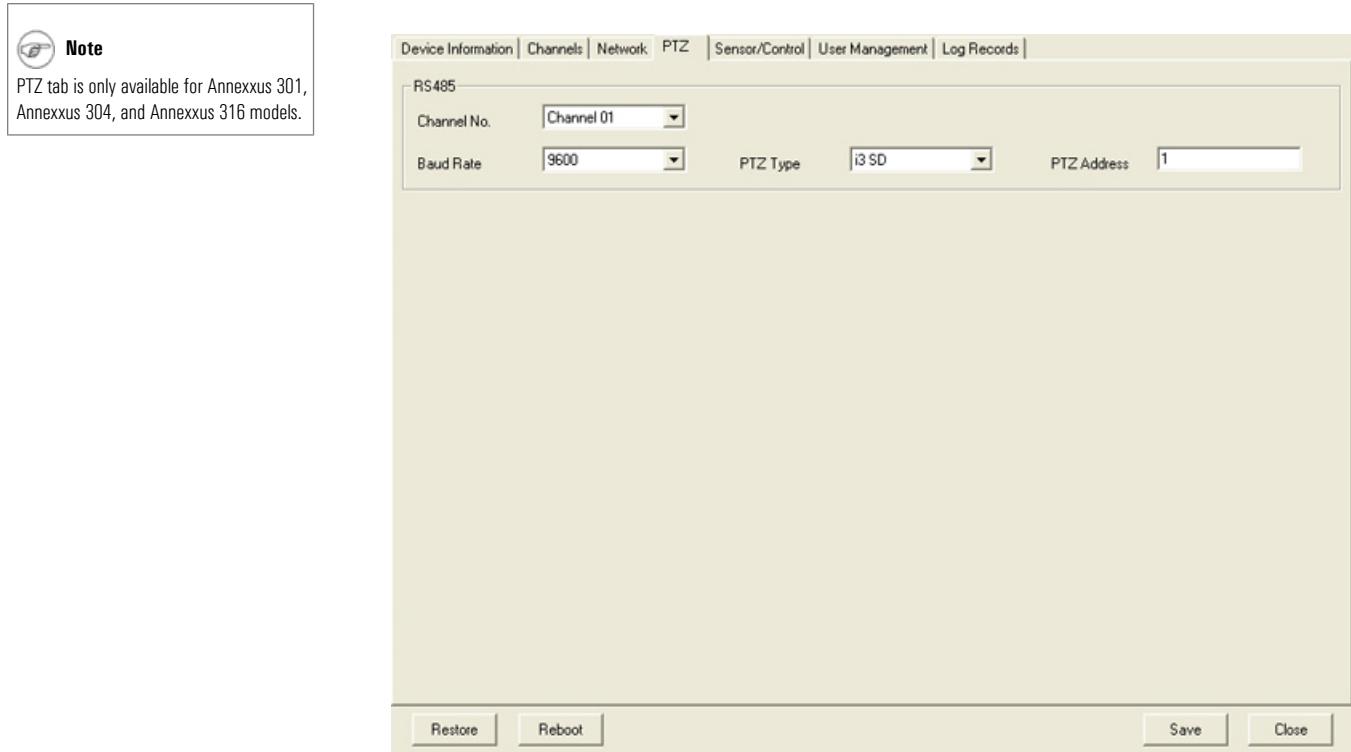
Unique **IP address** must be assigned to each Annexxus unit before installation. Unless this step is completed prior to installation, the customer will be unable to detect Annexxus module on their LAN/WAN network. See Changing IP Address section for instructions on how to change Annexxus IP address.

It is highly recommended to **Synchronize Annexxus Clock** to the time zone, where the module is being installed. Unless this step is completed, the time stamp on video recordings and log records (if available) will not match the current time. See Synchronizing Annexxus Clock section for instructions on how to synchronize Annexxus device clock.



2.8. PTZ Setup

In the PTZ Setup, the authorized users can configure the RS485 settings of the analog PTZ cameras connected to Annexxus 301, Annexxus 304, and Annexxus 316 models.



To configure the PTZ analog camera connected to the Annexxus 301/304/316 device, do the following:

1. Select the Channel number (BNC number on Annexxus module), where the PTZ cameras is connected
2. Set the Baud Rate to **9600**
3. Set the PTZ Type to **i3 SD**
4. Enter the PTZ Address (Dip-switch configured camera ID)
5. Click **Save** to save the PTZ settings

1. For Annexxus 304 modules, select the **Channel number** (BNC number on Annexxus module), where the PTZ cameras is connected
2. From the **PTZ Type** drop-down menu, select one of the supported PTZ protocols (e.g. i3 SD).
3. From the **Baud Rate** drop-down menu, select the baud rate of the PTZ camera. Please refer to the camera's manufacturer documentation to determine the correct baud rate setting. Use the table below to determine the baud rate setting for the known protocols.

PTZ Protocol	Supported Baud Rate
i3 SD	9600
i3 Z1200	9600

i3 Z2200	9600
Panasonic	9600
Pelco D	2400
Pelco P	9600

4. In the **PTZ Address** box, enter the PTZ camera's address. PTZ Address helps to distinguish between the different PT/Z cameras connected to the same RS485 port. Most Speed Domes have their PTZ Address assigned by dip-switches in the back of the camera. If the PTZ Address has been entered incorrectly, the PT/Z camera will not respond to user commands.
5. Click **Save** to save the PTZ configurations

For exact instructions on how to connect i³ daVinci PTZ camera to Annexxus 301/304/316, see the [Connecting daVinci Lite PTZ to Annexxus 301/304](#) and [Connecting daVinci Lite PTZ to Annexxus 316](#) sections.

2.9. Sensor/Control Setup

In the Sensor/Control Setup, the authorized users perform the following tasks:

- Enable/disable Sensor input(s)
- Assign sensor type to the enabled sensor input(s)
- Configure schedule for enabled sensor input(s)
- Associate enabled sensor input(s) with connected control output(s)
- Associate enabled sensor input(s) with selected video channel(s)
- Associate enabled sensor input(s) with PTZ Preset, PTZ Preset Pattern or PTZ Auto Pattern (applies to Annexus 301/304/316 units, where PTZ camera inputs are connected and properly configured in PTZ Setup tab).
- Configure schedule for connected control output(s)
- Configure default control output time
- Associate connected control output(s) with one or more system exceptions

Device Information | Channels | Network | Sensor/Control | User Management | Log Records |

Sensor Input

Sensor Input: Sensor Input 1 | Sensor Type: Normal Open

Enable | [Sensor Schedule ...](#) | [Associate with ...](#)

Control Output

Control Output: Control Output 1 | [Control Schedule ...](#)

Control Output Time: 5 Seconds

Exception Configuration

Exception Type: Internal storage device is full

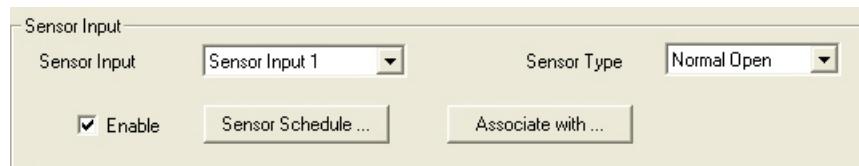
Check Mark to Activate Control Output:

Output 1

[Restore](#) | [Reboot](#) | [Save](#) | [Close](#)

2.9.1. Sensor Input(s) Setup

Annexus 301-series support one (1) sensor input, while Annexus 304/316 devices support up to four (4) sensor inputs. Each sensor input can be configured to operate based on a schedule. Annexus module can be configured to record video and/or trigger control output(s) in response to sensor activity. When sensor is properly connected and configured in Annexus Advanced Setup, alarm logs will also be generated and stored by Annexus module whenever sensor is triggered. In addition, each sensor input can be associated with a PTZ preset, PTZ Preset Pattern and/or Auto Pattern.



To configure a connected sensor input, do the following:

1. From the **Sensor Input** drop-down menu, select the sensor input. Make sure the sensor input is properly connected to the Annexxus device in accordance with the connection diagrams.
2. From the **Sensor Type** drop-down menu, select the sensor type: **Normally Open** or **Normally Closed** as per sensor device specifications.

Electrically, sensor (input) devices are classified as normally open and normally closed. The term "normally" refers to the state of the device in its resting position — without any external forces acting on it.

A **Normally Closed** sensor is any sensor with an electrical circuit closed by default. A normally closed sensor is one that normally allows electrical current to flow and which prevents the current flow when it is perturbed. In other words, Normally Closed contact will carry electricity until it is activated.

A **Normally Open** sensor is any sensor with an electrical circuit open by default. A normally open sensor is one that normally prevents current flow and which allows current to flow when it is perturbed. In other words, Normally Open contact will not carry electricity until it is activated.

3. Enable selected sensor input by checking off **Enable** checkbox.

2.9.1.1. Sensor Schedule

Each Annexxus sensor input can be limited by a user schedule. By configuring the sensor input schedule, the user can select specific days and/or times when the sensor activity will be monitored. Alarm logs will be generated when the sensor is triggered during a configured sensor schedule. For example, the warehouse manager may choose to monitor sensor activity in the warehouse during the after hours or during low/high traffic hours only.

Sensor schedule can be configured for each day of the week. Furthermore, up to 4 individual time frames can be configured for each daily sensor input schedule.

To configure Sensor Input schedule, do the following:

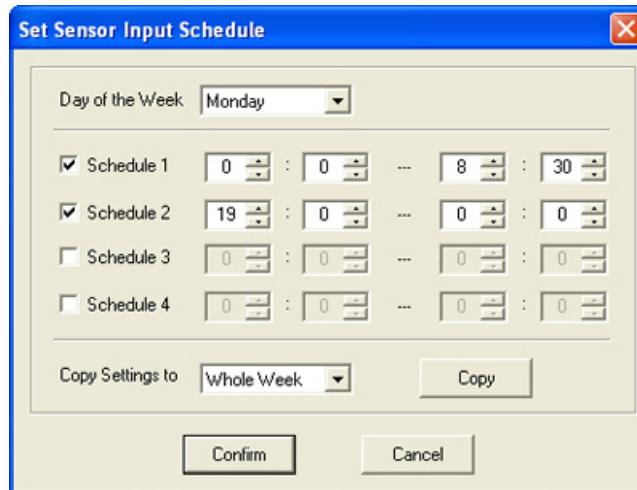
1. Click **Sensor Schedule...** The *Set Sensor Input Schedule* window will be displayed.
2. Select **Day of the Week** from the drop-down menu to create a weekly sensor schedule for the selected day.
3. Enable up to four (4) schedules. Each schedule can be assigned its specific Time frame.

Important

Remember that the time frames may not overlap or be repeated. Use military time format to configure the time frames. E.g. 22 = 10PM.

In the Example below, the selected sensor input activity will only be monitored:

- From 12:00AM until 8:30AM and
- From 7:00PM until 12:00AM



- To copy the same sensor input schedule to other days of the week or to the entire week, select the desired option in the **Copy Settings to** drop-down menu and click **Copy**. Repeat for other days of the week if desired.
- Click **Confirm** to save the configured sensor input schedule and to close *Set Sensor Input Schedule* window.

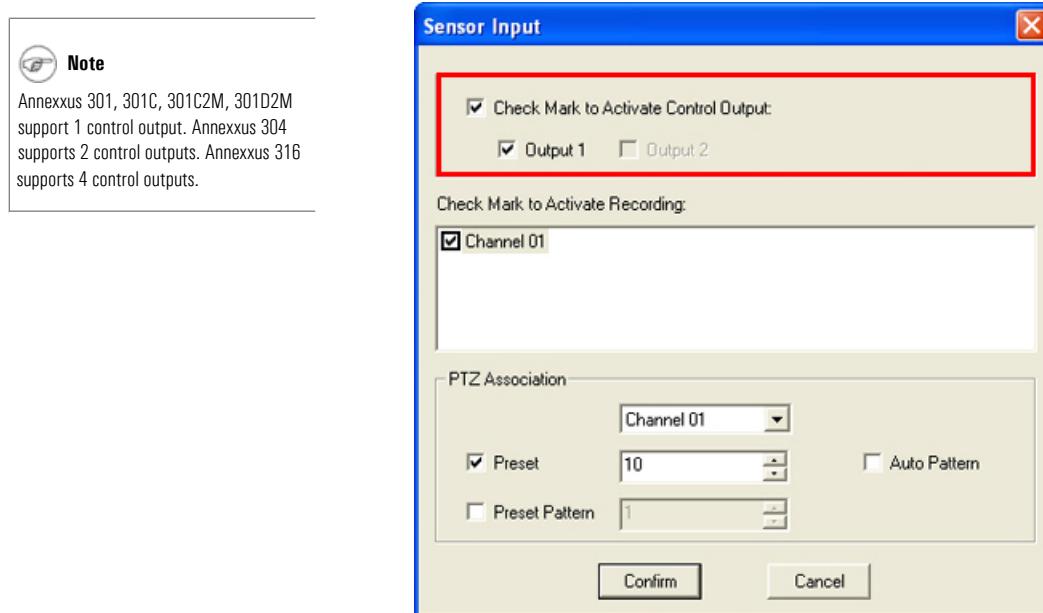
2.9.1.2. Associate Sensor Input with Control Output(s)

Each Annexxus sensor input can be associated with one or more connected control output(s).

Important: Control outputs must be properly connected to the Annexxus module and should use their own power supply. Furthermore, all control outputs must be also configured in the Sensor/Control setup tab, where Control Schedule and Control Output Time can be assigned to each control output.

To link Sensor Input to one or more control outputs, do the following:

1. Click **Associate With....** *Sensor Input* window will be displayed
2. Check off **Check Mark to Activate Control Output:** checkmark
3. Check off the desired control Output(s)



4. Click **Confirm** to save the settings and to close *Sensor Input* window.

2.9.1.3. Associate Sensor Input with Video Channel(s)

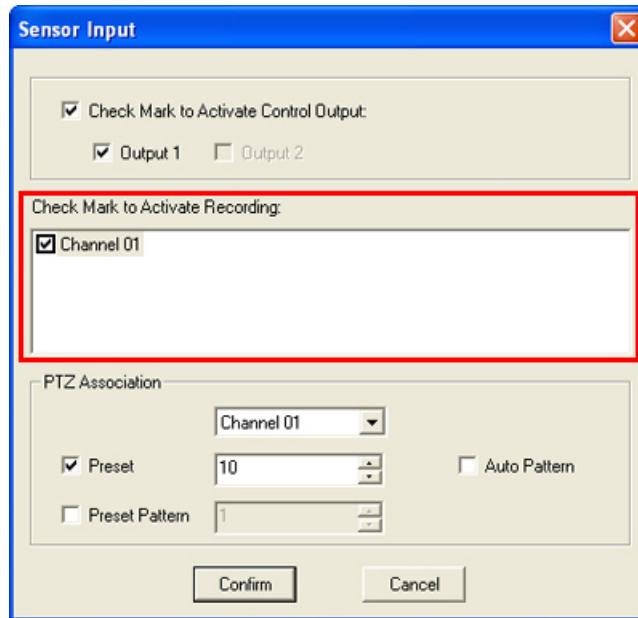
Each Annexus sensor input can be associated with one or more Annexus video channel(s), provided these video channels are properly connected and configured in Channels setup tab.

In addition to being able to generate alarm logs based on sensor activity, it is also possible to associate sensor activity with video recording.

To associate Sensor Input with one or more video channels, do the following:

1. Click **Associate With....** *Sensor Input* window will be displayed.
2. Check off the desired video channels in **Check Mark to Activate Recording** area. When sensor input is triggered, the video recording will be initiated for the selected video channel(s).

Important: Video channels must be properly connected to the Annexus module and must be also configured in the Channels setup tab, where Alarm Recording Schedule can be assigned to each video channel.



3. Click **Confirm** to save the settings and to close *Sensor Input* window.

2.9.1.4. Associate Sensor Input with PTZ Preset

Each Annexus sensor input can be associated with PTZ Preset/Preset Pattern/Auto Pattern. Applicable only to Annexus 301/304/316 models.

In addition to being able to record video and to generate alarm logs based on sensor activity, it is also possible to associate sensor activity with PTZ Preset, Preset Pattern or Auto Pattern.

To associate Sensor Input with PTZ Pattern, do the following:

1. Click **Associate With....** *Sensor Input* window will be displayed.
2. In PTZ Association, select the associated PTZ video channel.

Important: Video channels must be properly connected to the Annexus module and must be also configured in the PTZ setup tab, where PTZ Address, PTZ Protocol and Baud Rate can be assigned to each PTZ video channel.

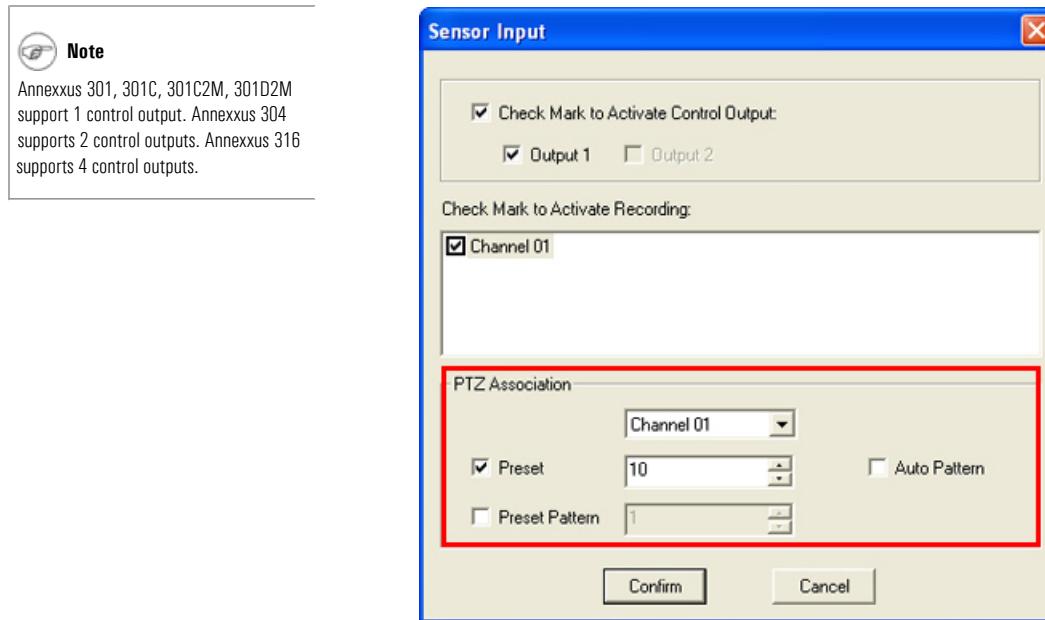
3. Check off **Preset** checkbox and enter the Preset number in the corresponding combo box. All presets must be configured through PTZ channel OSD menu.

OR

Check off **Preset Pattern** checkbox and enter the Preset Pattern number in the corresponding combo box. All preset patterns must be configured through PTZ channel OSD menu.

OR

Check off **Auto Pattern** checkbox to associate the sensor input with the Auto Pattern on the selected PTZ channel. Auto Pattern must be configured through PTZ channel OSD menu. Each time the selected Sensor Input is activated, the Auto Pattern of the connected

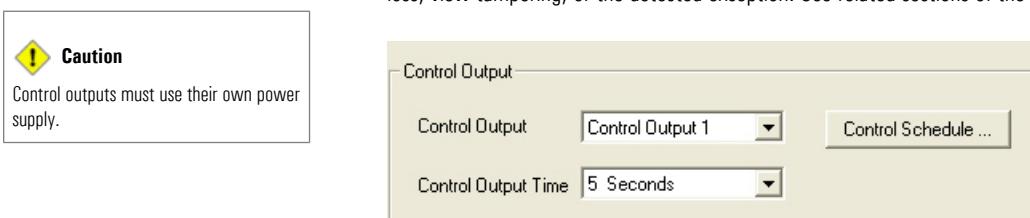


4. Check off the desired video channels to start video recording whenever sensor is triggered. Make sure to set corresponding video Channel to Alarm Recording. See Video Recording Schedule Setup section for more information.

2.9.2. Control Output(s) Setup

Annexus 301-series support one (1) control output. Annexus 304 supports up to two (2) control outputs; Annexus 316 supports up to four (4) control outputs. Before configuring control output settings, make sure the control outputs are properly connected to the Annexus module. Each control output can be configured to operate based on a schedule.

Annexus module can be configured to activate control output(s) in response to sensor activity, motion detection, video loss, view tampering, or the detected exception. See related sections of the manual for more information.



2.9.2.1. Control Schedule

Each Annexus control output can be limited by a user schedule. By configuring the control output schedule, the user can select specific days and/or times when the control output will be triggered in response to user settings (e.g. motion detection). For example, the warehouse manager may choose to sound the alarm in response to detected motion only during the after hours or on the weekends only.

Control schedule can be configured for each day of the week. Furthermore, up to 4 individual time frames can be configured for each daily control output schedule.

To configure the schedule for the control output, do the following:

1. From the **Control Output** drop-down menu, select the control output. Make sure the control output is properly connected to the Annexus device in accordance with the connection diagrams.

2. Click **Control Schedule...** The *Set Control Output Schedule* window will be displayed
3. Follow instruction in Sensor Schedule section for further instructions

2.9.2.2. Control Output Time

Each Annexus control output can be configured to stay active for the selected number of seconds/minutes after being triggered in response to user settings (e.g. motion detection). To configure Control Output Time, select one of the offered active times from the **Control Output Time** drop-down menu: 5 seconds, 10 seconds, 30 seconds, 1 minute, 2 minutes, 5 minutes, 10 minutes or manual (control must be manually turned off by the operator).

Note that this setting will affect all control output(s) applications configured by the user.

2.9.3. Exception Configuration Setup

Annexus modules generate alarm logs for a number of pre-defined exceptions. Annexus devices can also be configured to activate selected control output(s) in response to one or more detected exceptions.

Annexus modules offer the following list of pre-defined exceptions:

- Internal storage device is full (Applicable only to Annexus 301C/301C2M)
- Internal storage device error (Applicable only to Annexus 301C/301C2M)
- Network failure
- IP Address conflict
- Wrong user name or password. Login failed.
- Input and output video standards (NTSC and PAL) are different



To activate control output in response to a specific exception, do the following:

1. Select the exception from the **Exception Type** drop-down menu
2. Check off **Check Mark to Activate Control Output** checkbox
3. Check off the desired control Output(s)

2.10. User Management Setup

Each Annexxus device allows configuring one administrative account and up to 15 additional operator accounts.

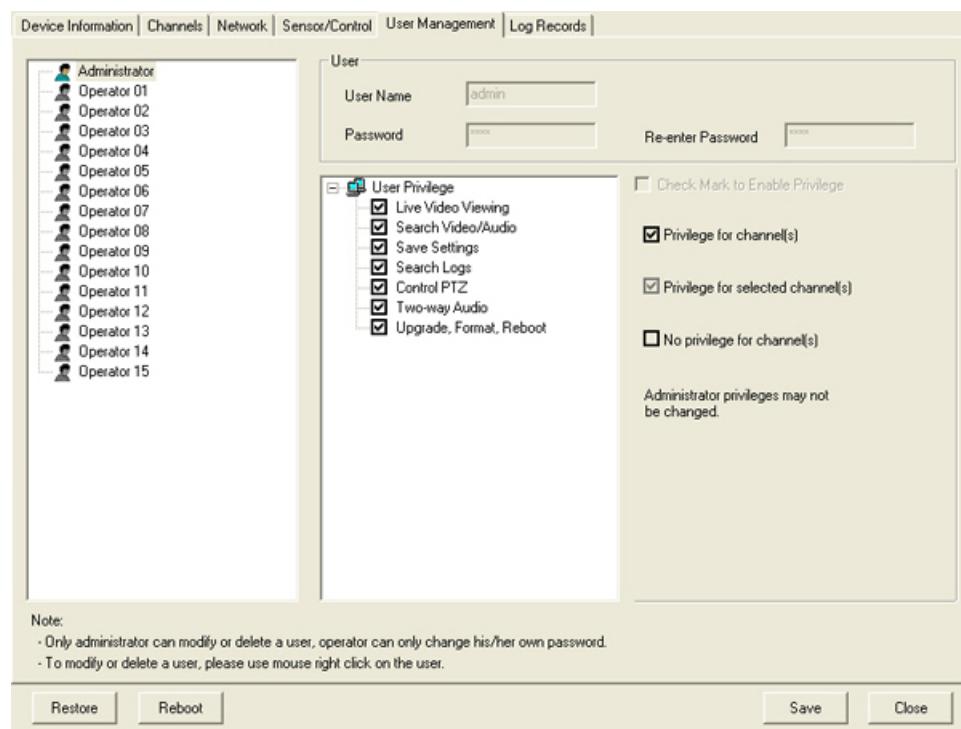
Administrator user

Default administrator user name is **admin**, default password is set to **1234**. Administrator user is the only user that may change administrative password. Administrator user name and user privileges cannot be changed. In case administrative password has been misplaced after being changed, use Annexxus Finder to reset the administrative password to the factory default.

Administrator user is the only user that can add, modify or delete additional operator users.

Operator user

Operator users will only have access to setup tabs and features that are specified in their user privileges. Operator user may not add, modify or delete other operator accounts. Operator user can only change his/her own password.



2.10.1. Changing Administrative Password

To change administrative password, you must be logged in as Administrator.

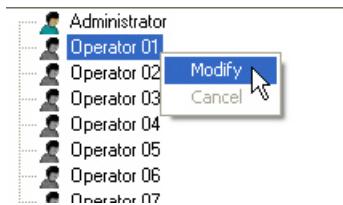
1. In the User Management setup tab, right-click on the Administrator account in the left-hand pane and select **Modify** from the context menu
2. Type in the new password in **Password** and **Re-enter Password** fields. Password may only consist of numbers and may not exceed 16 characters.
3. Click **Save** to save the new administrative password

2.10.2. Adding/Modifying/Deleting Operator User

Adding/Modifying Operator User

To add a new operator user or to modify existing operator user, do the following:

1. In the User Management setup tab, right-click on the desired Operator account in the left-hand pane and select **Modify** from the context menu



2. Enter the user name in **User Name** field. User Name may not exceed 16 characters.
3. Enter the password in **Password** and **Re-enter Password** fields. Password may only consist of numbers and may not exceed 16 characters.



4. Configure user privileges. Following privileges can be assigned to the operator user(s).

User Privilege	Privilege Limitation	Error Message shown to unauthorized users when privilege is disabled.
----------------	----------------------	---

Live Video Viewing Check off to allow the operator to view live video "Viewing video has failed due to network (configured per channel) from the selected channel(s). Note that this setting will affect the DVMS/NVR video viewing/re-coding. communication error. There may be too many connections with this device at the same time."

Search Video/Audio Check off to allow the operator to search video "Search and list file failed!" (configured per recorded channel onto the internal storage device).

Save Settings Check off to allow the operator to make changes "Save settings failed!" to Annexus setup.

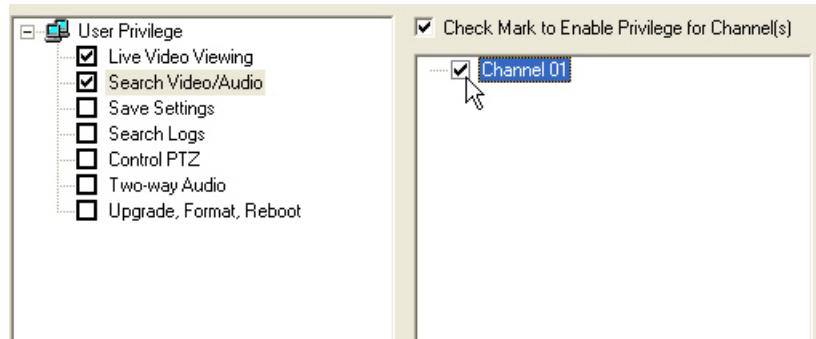
Search Logs Check off to allow the operator to search logs "The device is busy or network problem, saved onto the internal storage device. search log exception!"

Control PTZ Check off to allow the operator to control connected PTZ camera(s). Applies to Annexus 301/304/316 only.

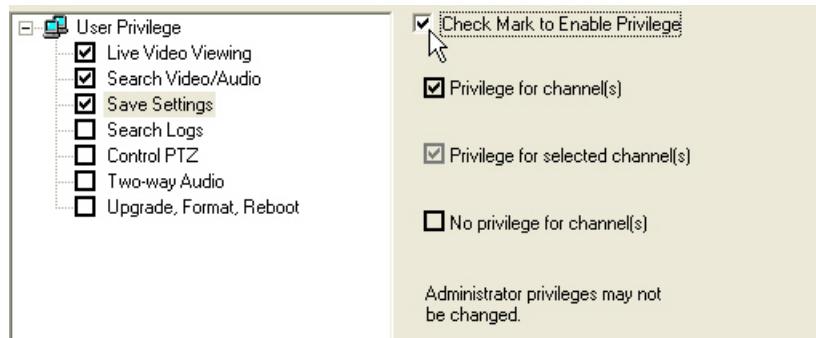
Two-way Audio Check off to allow the operator to initiate and to stop a two-way audio conversation.

Upgrade, Format, Reboot Check off to allow the operator to upgrade the device firmware, format internal storage device (Annexus 301C/301C2M only), or to reboot the Annexus device.

For **Live Video Viewing** and **Search Video/Audio** privileges, check off **Check Mark to Enable Privilege for Channel(s)** checkbox first, then check off the check boxes for the video channels that will be accessible to the operator user. This only applies to Annexus 304/316 models as all other Annexus models support one video channel only.



For **Save Settings**; **Search Logs**; **Control PTZ**; **Two-way Audio**; **Upgrade, Format, Reboot** privileges, check off the **Check Mark to Enable Privilege** checkbox.

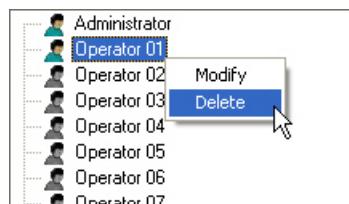


5. Click **Save** to save changes to all user accounts

Deleting Operator User

To delete an operator user, do the following:

1. In the User Management setup tab, right-click on the desired Operator account in the left-hand pane and select **Delete** from the context menu



Note that the user will be deleted immediately and no warning message will be displayed.

2. Click **Save** to save changes to all user accounts

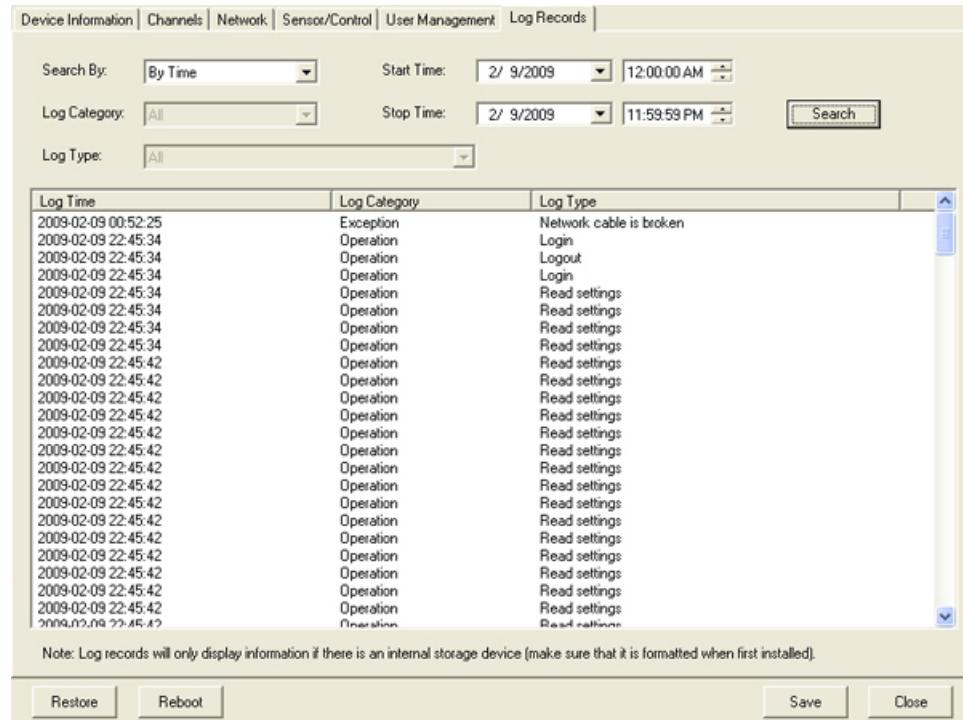
2.11. Log Records Setup

Annexus devices that support internal storage device (Annexus 301C/301C2M) also support log records. Logs are generated based on alarms, exceptions, or specific setup operations. The internal storage device must be formatted and inserted into the Annexus device, otherwise log records will not be generated/saved.

To prevent unauthorized users from accessing Log Records, go to User Management setup tab.

Logs can be searched by Time, Type (Alarm/Exception/Operation) and by Type + Time.

To display all logs, open Log Records setup tab, select **All** from **Search By** drop-down menu and click **Search**. The most recent 2000 logs will be displayed.



The screenshot shows the 'Log Records' tab of the device's configuration interface. At the top, there are search filters: 'Search By' (set to 'By Time'), 'Start Time' (2/9/2009, 12:00:00 AM), 'Log Category' (set to 'All'), 'Stop Time' (2/9/2009, 11:59:59 PM), and 'Log Type' (set to 'All'). A 'Search' button is to the right of the filters. Below the filters is a table with three columns: 'Log Time', 'Log Category', and 'Log Type'. The table contains approximately 20 log entries, mostly 'Operation' logs with various sub-categories like 'Read settings' and 'Logout'. At the bottom of the table, a note says: 'Note: Log records will only display information if there is an internal storage device (make sure that it is formatted when first installed.)'. At the very bottom are 'Restore' and 'Reboot' buttons on the left, and 'Save' and 'Close' buttons on the right.

2.11.1. Searching by Type

To search logs by type, do the following:

1. Select **By Type** from the **Search By** drop-down menu
2. Select **All**, **Alarm**, **Exception** or **Operation** from **Log Category** drop-down menu.
3. Select **Log Type** from the drop-down menu. Depending on the Log Category, the following Log Types are available:

Alarm -> **Sensor is triggered** (Sensor(s) must be properly connected to the Annexus device and configured in Sensor/Control setup)

Control is triggered (Control(s) must be properly connected to the Annexus device and configured in Sensor/Control setup)

Motion alarm start (Motion Detection must be enabled and Motion Detection areas must be configured in Channels setup)

Motion alarm stop (Motion Detection must be enabled and Motion Detection areas must be configured in Channels setup)

View tampering start (View Tampering must be enabled and View Tampering area must be configured in Channels setup)

View tampering stop (View Tampering must be enabled and View Tampering area must be configured in Channels setup)

Exception - Video Loss (Video Loss must be enabled in Channels setup)

>

Wrong user name or password. Login failed. (To change administrative password or configure additional operators, go to User Management setup tab)

Internal storage device is full. (Internal storage device must be formatted and inserted into the Annexxus device)

Internal storage device error. (Internal storage device must be formatted and inserted into the Annexxus device)

Network failure. (Check LAN cable(s) and LAN connection settings. Use Annexxus Finder to locate all Annexxus 301-series devices on the Local Area Network)

IP Address conflict. (To configure Annexxus IP address, go to Network setup tab)

Network cable is broken

Operation - Power On

>

Login (To configure additional users, go to User Management setup tab)

Logout

Read settings

Save settings (To prevent unauthorized users from changing device settings, go to User Management setup tab)

Reboot (To prevent unauthorized users from rebooting device, go to User Management setup tab)

Start two-way audio (To prevent unauthorized users from accessing two-way audio feature, go to User Management setup tab)

Stop two-way audio (To prevent unauthorized users from accessing two-way audio feature, go to User Management setup tab)

Upgrade firmware. (To prevent unauthorized users from upgrading device firmware, go to User Management setup tab)

Search (Available for Annexxus 301C/301C2M only. To prevent unauthorized users from searching local audio/video recording, go to User Management setup tab)

Control PTZ. (Available for Annexxus 301C/301C2M only. To prevent unauthorized users from controlling PTZ cameras, go to User Management setup tab. PTZ cameras must be correctly connected to the Annexxus 301/304/316 device and configured in PTZ Setup tab)

Log Time	Log Category	Log Type
2009-02-12 03:44:32	Exception	Wrong user name or password. Login failed
2009-02-12 03:47:20	Exception	Wrong user name or password. Login failed
2009-02-12 23:22:12	Exception	Wrong user name or password. Login failed
2009-02-21 04:03:42	Exception	Wrong user name or password. Login failed

- Click **Search**. The most recent 2000 logs that match the set criteria will be displayed.

2.11.2. Searching by Time

To search logs by time, do the following:

- Select **By Time** from the **Search By** drop-down menu
- Configure the date and time in **Start Time** and **Stop Time** boxes. By default, the time search is set to search within the current 24-hour period.

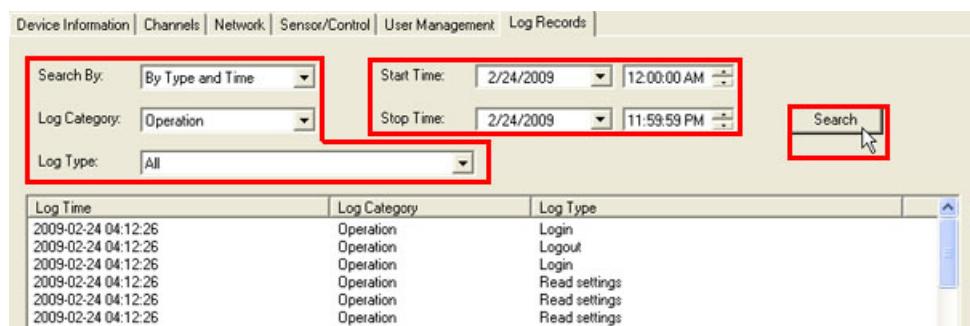
Log Time	Log Category	Log Type
2009-02-24 04:12:26	Operation	Login
2009-02-24 04:12:26	Operation	Logout
2009-02-24 04:12:26	Operation	Login
2009-02-24 04:12:26	Operation	Read settings
2009-02-24 04:12:26	Operation	Read settings
2009-02-24 04:12:26	Operation	Read settings

- Click **Search**. The most recent 2000 logs that match the set criteria will be displayed.

2.11.3. Searching by Type and Time

To search logs by type and time, do the following:

- Select **By Type and Time** from the **Search By** drop-down menu
- Configure the date and time in **Start Time** and **Stop Time** boxes. By default, the time search is set to search within the current 24-hour period.
- Select **All**, **Alarm**, **Exception** or **Operation** from **Log Category** drop-down menu.
- Select **Log Type** from the drop-down menu.



The screenshot shows a software interface for searching log records. At the top, there is a navigation bar with tabs: Device Information, Channels, Network, Sensor/Control, User Management, Log Records, and a Help icon. Below the navigation bar, there is a search configuration area with the following fields:

- Search By: A dropdown menu set to "By Type and Time".
- Start Time: A date and time selector set to 2/24/2009 at 12:00:00 AM.
- Stop Time: A date and time selector set to 2/24/2009 at 11:59:59 PM.
- Log Category: A dropdown menu set to "Operation".
- Log Type: A dropdown menu set to "All".
- Search: A button with a magnifying glass icon.

Below the search configuration is a table titled "Log Records" with the following columns: Log Time, Log Category, and Log Type. The table contains the following data:

Log Time	Log Category	Log Type
2009-02-24 04:12:26	Operation	Login
2009-02-24 04:12:26	Operation	Logout
2009-02-24 04:12:26	Operation	Login
2009-02-24 04:12:26	Operation	Read settings
2009-02-24 04:12:26	Operation	Read settings
2009-02-24 04:12:26	Operation	Read settings

5. Click **Search**. The most recent 2000 logs that match the set criteria will be displayed.

3

Remote Connection via Internet Explorer (Web Browser)

Topics Covered

- Annexxus Browser Interface
- Live Backup
- Live Snapshot
- Search and Playback Internal Video Recordings
- Annexxus Setup

Annexxus-series allows viewing video remotely and configuring Annexxus setup via built-in web viewer.

To access Annexxus-series via web browser, follow the steps below:

1. Open Internet Explorer browser window
2. Enter Annexxus static or dynamic IP address in the address line. The default IP address (192.0.0.64) must be changed by the technician *before* installing Annexxus module on site. Please contact your technician/installer for Annexxus IP information.
3. When accessing Annexxus-series for the first time over the Internet Explorer, you will be prompted to install Active X control. Click on the banner and select **Install Active X...** from the context menu.

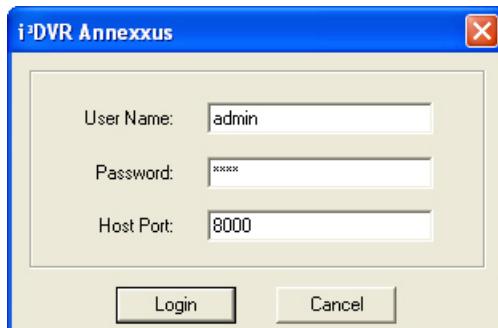
Tip
For instructions on how to change Annexxus IP address, please read [Changing IP Address](#) section.



4. In the Internet Explorer - Security Warning window, click **Install**.



5. Annexxus web browser screen will be displayed with the Login window. Enter Annexxus default Username (**admin**) and Password (**1234**) and click **Login**.



 **Note**
The login is case sensitive. Manage Annexxus users in User Management setup.

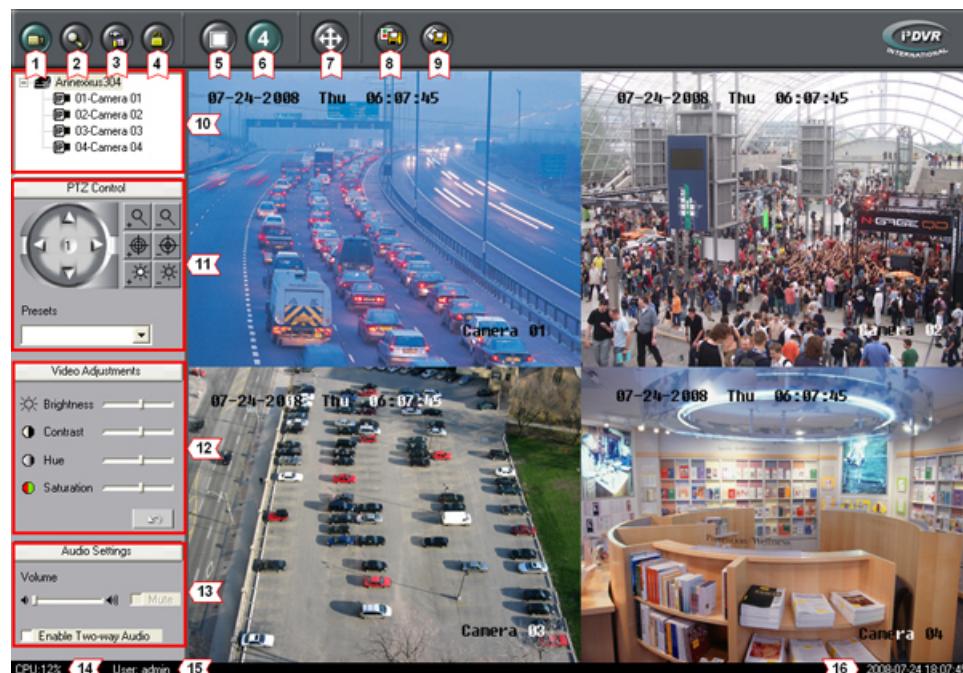
 **Note**
The browser interface is identical for all Annexxus devices. Certain features may not be available depending on Annexxus model.

6. After the successful login, connected channels will be displayed on the main screen of the Annexxus web browser.
If the connection was unsuccessful, try to troubleshoot Annexxus Web Browser application.

3.1. Annexus Browser Interface

Annexus web browser contains the following buttons and areas:

1. Live Mode	9. Live Backup
2. Search Mode (supported only with Annexus 301C and Annexus 301C2M models)	10. Channels Tree List
3. Setup Mode	11. PTZ Control Panel
4. Login/Logout	12. Video Adjustments Panel
5. Single Camera Screen Division	13. Audio Settings Panel
6. Quad Screen Division	14. CPU Usage Indicator
7. Full Screen	15. Current User
8. Snapshot	16. Current Date and Time



Live Mode – displays the Annexus Live mode. In Live mode, the user can view selected channels, control PTZ cameras, adjust channels' brightness/contrast/hue/saturation settings, listen to live audio, enable two-way audio communication, and save live snapshot or video backup onto the local media storage.



Search Mode – displays the Annexus Search mode, which permits channel search and playback, image backup and video file backup and download by time, date, and channel.

This function is supported only by certain Annexus models as it requires a hardware storage media to be accepted by the module.



Setup Mode - displays Annexus setup options.



Login/Logout - in order to access the Annexus setup, view channels or perform any other activity, the user must first log in. To log off, click the **Logout** button. Default username/password are: **admin/1234**. Additional user accounts can be added in User Management setup tab.



Displays the selected channel in 1-channel Screen division on the main screen. Double-click on the desired channel to display it in a 1-channel screen division, or select channel on the main screen and click the "1" screen division button.



Displays all available channels in a 4-channel Screen division on the main screen.



Full Screen - This button displays the live screen without user interface (no menu bars shown).



To exit, click the following icon in the top right-hand corner of the screen:



Live Backup - This button allows initiating live backup of the video recording from selected video channels onto local media storage. Each backup file will be saved as a separate file. Annexus player is needed to play back the *.axv live backup video clips. For more information, see Live Backup section.



Live Snapshot - This button allows taking a live snapshot of selected video channel in the Live mode. The snapshot will be saved onto local media storage. For more information see Live Snapshot section.

CPU:12%

CPU Usage Indicator - displays the percentage of hard disk space used for video recording. For example: the diagram shows that 60.55% of the total allocated disk space has been used.

User: admin

Current User - displays the current user logged into the Server

2008-07-24 18:07:45

Date and Time - displays the current date and time. This information is acquired from the Windows OS. If date/time is not correct, access the Desktop and double-click the Windows time display in the right-hand corner. Set the appropriate time and click **Apply**.

3.1.1. Tree List. Show/Hide/Activate Channels.

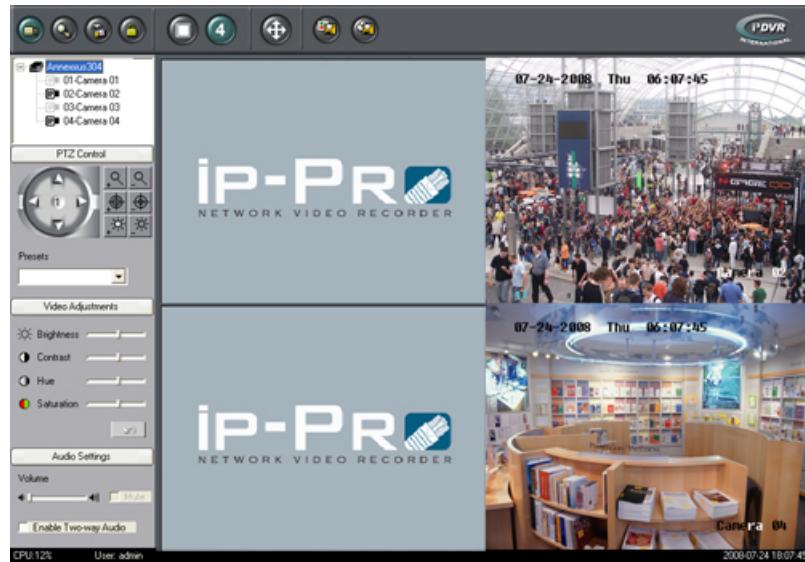
In Live mode, the user can view all connected video cameras on the main display. Use the Tree List to show/hide channels on the screen.

Double-click the camera icon to hide it from the main display; double-click again to show the hidden camera. The hidden camera icons will be grayed out. In the example below, Cameras 01 and 03 are hidden from the main display.

To hide all cameras, double-click Annexus root icon; to show all cameras, double-click Annexus root icon again.



Hidden cameras are replaced with a proprietary image.



By clicking on the camera icons in the tree list or directly on the main screen, the channel will be activated. Note that the PTZ Control and Video Adjustments panels apply to the currently active camera only.

3.1.2. Video Adjustments Panel

The Video Adjustments panel allows to adjust Brightness, Contrast, Hue and Saturation for selected video channel. Click the **Undo** button to reset all parameters to the default settings.



3.1.3. Live Video and Audio Streaming

Annexus supports two simultaneous video streams: higher quality and higher compression. Main stream is usually set to higher resolution and higher quality, while sub stream is set to lower resolution and/or to lower quality. The user can switch between main and sub video streaming to either see the better quality video image or to be able to view the video faster over the Internet.

Annexus modules accept 1 or 4 audio inputs depending on the model. Connect the audio inputs to the audio connectors in accordance with the connections diagrams. Note that an audio input is being matched with the corresponding video input, i.e. Video Channel #1 will be matched up with Audio Channel #1, etc.

To select either Main or Sub video stream for live viewing, right-click on the desired channel image on the main screen and select either **Main stream** or **Sub stream** from the context menu.



To enable Audio input for corresponding video channel, right-click on the desired channel image on the main screen and select **Enable Audio** from the context menu. Only one audio input may be enabled at any given time, so when the audio stream is enabled on the second selected channel it is automatically disabled on the previously selected channel.

3.1.3.1. Audio Settings Panel

The Audio Settings panel allows to mute or control the audio volume of the currently enabled audio input stream. First, enable audio stream on the selected video channel. See Live Video and Audio Streaming section for instructions. Drag the **Volume** slider to the right/left to increase/decrease audio volume. Check off Mute checkbox to mute audio input entirely.



Two-way Audio Feature

The Audio Settings panel also includes **Two-way Audio** feature. Each Annexxus unit has two physical audio ports used for two-way audio function: Line In and Audio Out. Connect headset or speakers to the Audio Output port in accordance with the connections diagram. The regular microphone will not work in this application, special line-in audio device must be connected to Line In port, a regular microphone can then be connected via line-out audio device (but not directly into the Annexxus module).

To activate two-way audio feature, check off the **Enable Two-way Audio** checkbox on the Audio Settings panel. The following message window will be displayed. Click **OK** to close the message window.



Speak into the line-in audio device to transmit audio to the remote user's PC. The audio from remote PC will be heard from the speakers connected to the Audio Output port connected to the Annexxus module. Uncheck **Enable Two-way Audio** checkbox to stop audio transmission.

3.1.4. PTZ Control Panel

Annexxus web browser allows controlling the PTZ cameras remotely. Ensure that the correct PTZ type (model) is selected in PTZ Setup tab. Make sure to properly connect the PTZ cameras to RS485 port first in accordance with the Annexxus connections diagram.

Note that PTZ control privilege can be restricted for selected users.

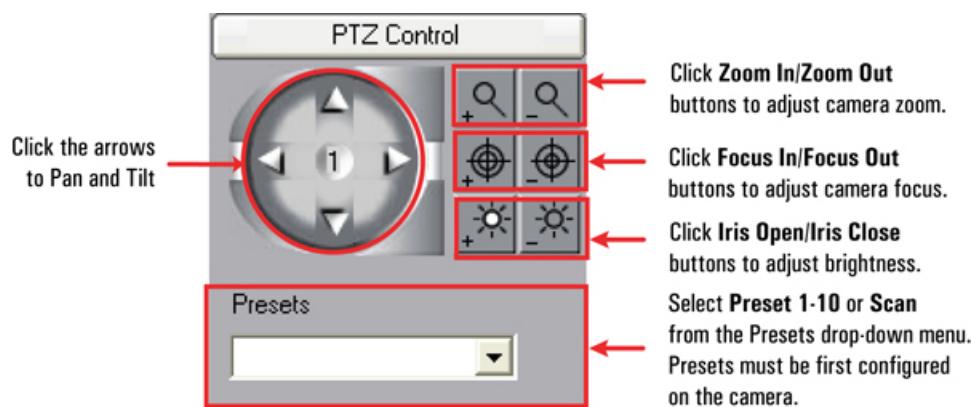
PTZ cameras connected to the Annexxus 301/304/316 module can be controlled from:

1. Annexxus web browser (authorized users only)
2. SRX-Pro/iP-Pro Server (authorized users only)
3. SRX-Pro/iP-Pro Remote (authorized users only)

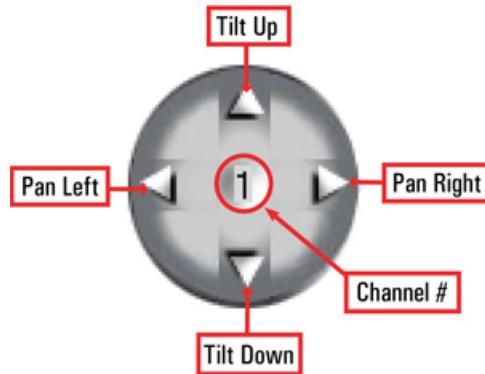
In the PTZ control panel the user can:

1. Change the pan-tilt settings
2. Zoom in and out
3. Focus the image
4. Enable one of 10 presets, or enable AutoPan feature for speed dome(s)

To control Zoom/Focus/Iris or activate presets, follow the diagram below:



To control the Pan/Tilt position of the camera, follow the PTZ Control Wheel diagram below:



To control the PTZ camera, do the following:

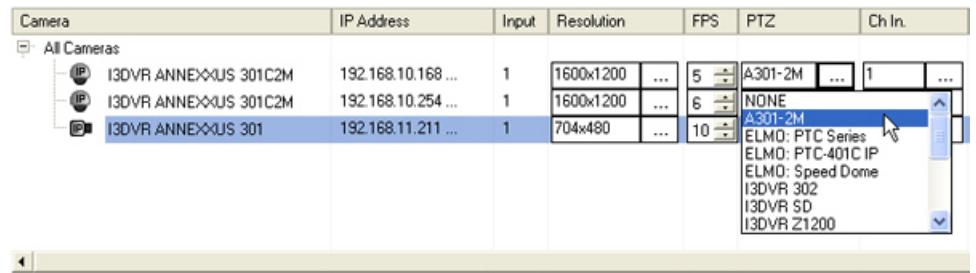
1. Connect PTZ cameras to RS-485 port on Annexus module in accordance with the connections diagram
2. Configure PTZ camera in Annexus Channels Setup. Correct PTZ camera model and PTZ Address must be configured.
3. Locate a PTZ channel on the Annexus web browser main screen and select it.
4. Double-click the video image. Selected channel will be displayed in full screen mode.
Note that if the audio channel is assigned to the selected video channel, the **Volume** control window will also be displayed in the bottom right corner.
5. The PTZ video channel can now be controlled.
 - a. To control the PTZ channel with PTZ control buttons, click the Advanced Control Panel (located in the SRX-Pro Control Center).
 - b. To control the PTZ channel with the in-cameo function, position the mouse cursor within the live view window, left-click and hold down the mouse button. Move the cursor in the desired direction and the PTZ camera follow the cursor direction.

3.1.5. OSD Display

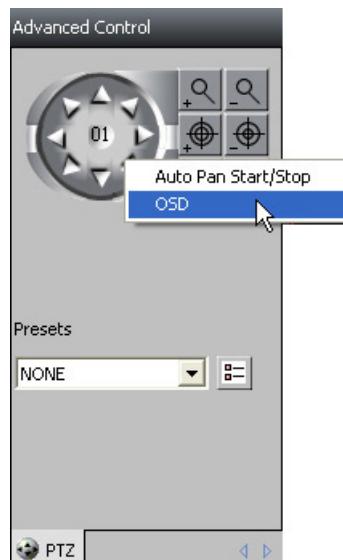
Annexus 301-D2M dome camera supports OSD Display, which can only be accessed through SRX-Pro or iP-Pro software.

To access the Annexus 301-D2M camera's OSD menu, do the following:

1. Open IP Camera setup tab in SRX-Pro/iP-Pro Server software
2. Select the IP camera from the list and click the PTZ **Browse** button 
3. Select A301-2M protocol from the PTZ protocol drop-down menu



4. From the View Menu, select **Advanced** or **Tree** view
5. Double-click Annexxus 301-D2M channel image in the Main Screen. PTZ control panel will appear on the screen
6. Right-click one the channel number inside the PAN/TILT wheel and select **OSD** from the context menu. The camera On-screen Display will be overlaid on top of the live video.



<MAIN MENU>

Important

On-screen Display will become a part of your video recording and cannot be removed after the video has been recorded.

Category	Options
LANGUAGE	ENGLISH
FLICKER CONTROL	50Hz / 60Hz (PAL/NTSC)
RESOLUTION	Display Only. This setting cannot be changed through OSD.
FRAME	Display Only. This setting cannot be changed through OSD.
SHUTTER	OFF/AUTO*2/AUTO*5
AUTO GAIN	OFF/LOW/MIDDLE/HIGH
DAY/NIGHT	AUTO/DAY/NIGHT
WHITE BALANCE	OFF/AUTO
EFFECTS MODE	OFF/SEPIA/NEGATIVE/SOLARIZE1/SOLARIZE2
MIRROR	OFF/LEFT RIGHT/UP BOTTOM/CENTRE
EPTZ	OFF/ON

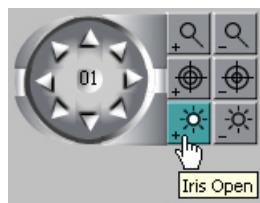
	SAVE/CANCEL/DEFAULT
--	---------------------

Navigating OSD

- To select one of the OSD categories, use the Pan buttons on the PTZ wheel (Up/Down)
- To enter one of the OSD categories and to change the category option, use the Tilt buttons on the PTZ wheel (Left/Right)
- To improve image quality and reduce possible ghosting effect, adjust Shutter and Auto Gain parameters
- To exit the OSD menu, position the cursor next to the **EXIT** category (Pan Up/Down), then use the Tilt Left/Right buttons to select **SAVE**, **CANCEL** or **DEFAULT**.

SAVE - exit OSD saving all changes, **CANCEL** - exit OSD discarding all changes, **DEFAULT** - exit OSD and set all settings to factory default.

Once you are ready to exit On-Screen Display menu, click the **Iris Open** button (see image below). The OSD will disappear from live video screen.



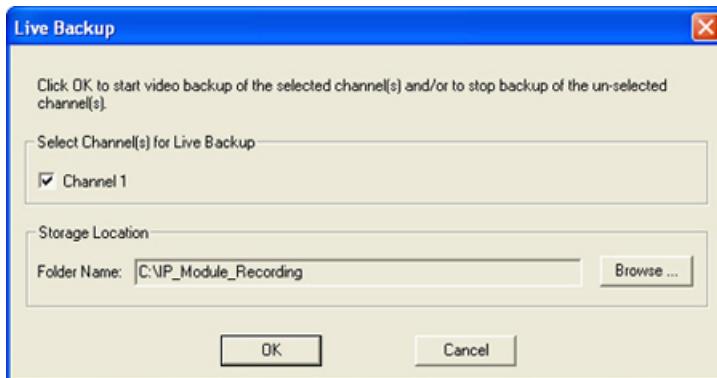
3.2. Live Backup

Live Backup allows recording live video feed from selected video channel(s) onto the local PC storage (local HDD, network HDD, or USB storage device). Recorded video is saved in the *.axv format and can be played back with Annexxus Player application.

To start Live Backup video recording, do the following:

1.

Click the **Live Backup** button on the main screen . The *Live Backup* window will be displayed.



2. In the *Live Backup* window, check off the video channel(s) you want to backup.
3. Select **Storage Location**. Click **Browse...**, locate and select the destination folder on a local or network hard drive, where the *.axv live video backup files will be stored. Default location is C:\IP_Module_Recording.
4. Click **OK** to start the live video backup. The **Live Backup** button on the main screen will turn teal to indicate live backup in progress . Each time live backup is initiated, a new *.axv file is created for each video channel in the storage location folder.

Tip
Annexxus 301-series devices support one video channel, Annexxus 304 supports up to 4 channels, and Annexxus 316 supports up to 16 channels.



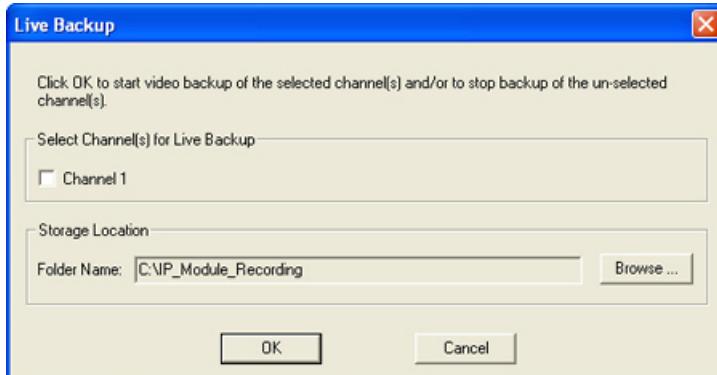
The video backup files are named according to the following standard: IPADDRESS_CHANNEL_YYYYMM-DD_HHMMSS.axv.

For example, 192.168.10.63_01_20080423_141000.axv video file was recorded from the Annexxus module located on the 192.168.10.63 IP address, Video Channel 1, April 23, 2008 at 2:10PM.

To stop Live Backup video recording for one or more channels, do the following:

1.

Click the **Live Backup** button on the main screen . The *Live Backup* window will be displayed.



2. In the *Live Backup* window, uncheck the video channels to stop Live Backup. The checked channels will continue recording live backup onto the local storage.
3. Click **OK** to stop live video backup for unchecked channels. If all channels were unchecked, the *Live Backup* button on the main screen will return to its normal state to indicate that no Live Backup is being created .

3.3. Live Snapshot

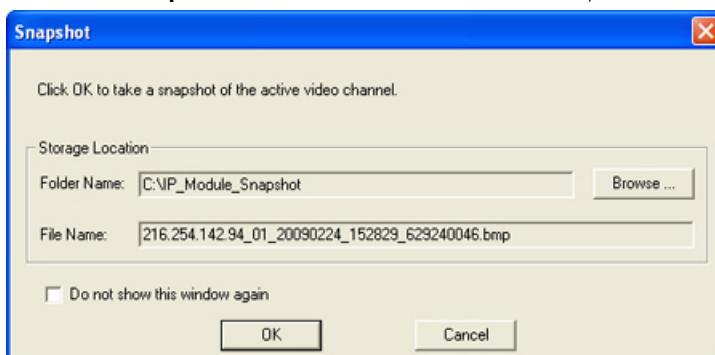
Live Snapshot allows taking an instant *.bmp snapshot of the active video channel and save it onto the local PC storage (local HDD, network HDD, or USB storage device). The saved *.bmp snapshots can be opened with any standard windows image viewer.

To take a Live Snapshot of the active video channel, do the following:

1. If more than one video channel is supported by Annexus device, select the desired video channel on the main screen by positioning the mouse cursor over the live video image and pressing the left mouse button. The selected video channel will become active. Active video channel is identified by the red box shown around the video image.

2.

Click the **Live Snapshot** button on the main screen . The *Snapshot* window will be displayed.



3. In the *Snapshot* window, select **Storage Location**. Click **Browse...**, locate and select the destination folder on a local or network hard drive, where the *.bmp live snapshot files will be stored. Default location is C:\IP_Module_Snapshot.
4. Make a note of the new snapshot File Name. Each snapshot is assigned a random number attached to the end of the file name to distinguish between snapshots taken within the same second.
5. Click **OK** to save the the *.bmp snapshot.

The snapshot files are named according to the following standard: IPADDRESS_CHANNEL_YYYYMM-DD_HHMMSS_RANDOMNUMBER.bmp.

For example, 216.254.142.91_01_20090224_153600_629723796.bmp snapshot was taken from the Annexus module located on the 216.254.142.91 IP address, Video Channel 1, February 24, 2009 at 3:36PM.

3.4. Search and Playback Internal Video Recordings

Annexus 301C/301C2M models support internal video recording to the internal storage device (SD card). The video stored on the Annexus device can be played back and backed up onto the local storage (local HDD, network HDD, or USB storage device).



Note

This function is not supported by Annexus 301, 304 and 301D2M devices. For the Annexus 316, a user may search and playback internal video recordings only if using SRX-Pro or IP-Pro software, NOT through web interfaces.



Tip

The internal storage device must be formatted and inserted into the Annexus device. Video Recording settings must be properly configured in the Channels setup tab.

A number of settings will affect how many minutes/hours of video recording can be stored on the internal storage device and how long these recordings will be stored for:

- Overwrite mode setting
- Video Recording Schedule settings
- Video settings (e.g. resolution, frame rate)
- Internal storage device size (Annexus devices support SD cards up to 8GB)

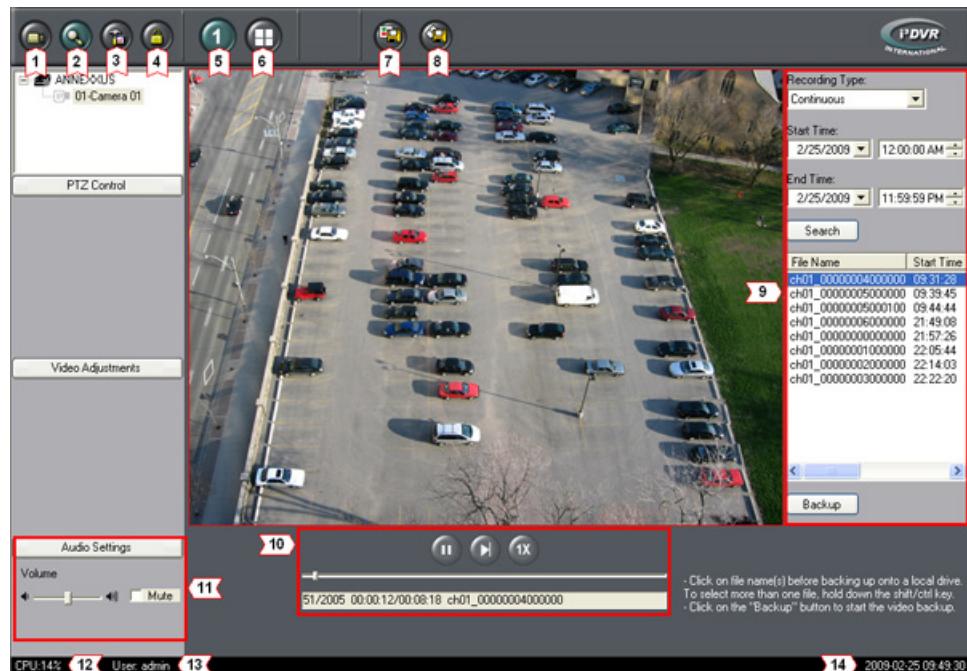
3.4.1. Search Mode Window

To search video recordings stored on the Annexus local storage device, connect to the Annexus device through Internet Explorer.

In the Annexus Browser window, click the **Search** button. The Search window will be displayed.

Annexus web browser Search window contains the following buttons and areas:

1. Switch to Live Mode	8. Backup. Enabled only when a backup video file is playing
2. Search Mode (Currently Open). Supported only with Annexus 301C and Annexus 301C2M models)	9. Search Panel
3. Switch to Setup Mode	10. Playback Control Panel
4. Logout	11. Audio Settings Panel. Mute or adjust volume of the backup recording.
5. Single Camera Screen Division	12. CPU Usage Indicator
6. Quad Screen Division (default)	13. Current User
7. Snapshot. Enabled only when a backup video file is playing.	14. Current Date and Time



Live Mode – same as the Main Screen.



Search Mode – same as the Main Screen.



Setup Mode – same as the Main Screen.



Logout – same as the Main Screen.



1 Displays the selected backup video clip in a 1-channel Screen division. Double-click on the desired backup clip to display it in a 1-channel screen division.



1

4 Display the selected backup video clip in a 4-channel Screen division. This screen division is selected by default in the Annexxus Search Mode window.



4

Backup - Enabled only when a backup video file is playing. This function allows saving a portion of the backup video recording in the *.axv format onto a local storage (local HDD, network HDD, USB storage device). To stop recording, click the Backup button again. Annexxus Player is needed to play back the *.axv backup video clips.



Snapshot - Enabled only when a backup video file is playing. This function allows saving a *.bmp snapshot file of the backup video recording onto a local storage (local HDD, network HDD, USB storage device).



CPU: 12%

CPU Usage Indicator - same as the Main Screen.

User: admin

Current User - same as the Main Screen.

2008-07-24 18:07:45

Date and Time – same as the Main Screen.

3.4.2. Searching Backup Video Recordings

Annexus 301C/301C2M will record video onto the internal storage device depending on the Annexus Video Recording Schedule configurations, provided that the internal storage device is formatted and inserted into the Annexus device.

Make sure that the video recording schedule is correctly configured. When recording based on sensor activity, make sure the sensor is connected to the Annexus device and is properly configured in the Sensor/Control setup tab. When recording based on motion, make sure the Motion Detection areas and Motion Detection schedule are configured and in the Channels setup tab.

To search the Annexus internal storage device for the stored video recordings, do the following:

1.



Click the **Search** button to open the Search Window

2. Select the **Recording Type** from the drop-down menu.

This setting will filter stored video recordings based on the type of recording: **ALL** (to display all saved video files), **Continuous, Motion** (recorded based on Motion activity only), **Alarm** (recorded based on Sensor activity only), **Motion and Alarm** (recorded based on *Motion and Alarm* recording schedule; both motion and sensor activity must be detected for the video recording to occur).

3. Configure the date and time in **Start Time** and **End Time** boxes. By default, the time search is set to search within the current 24-hour period.

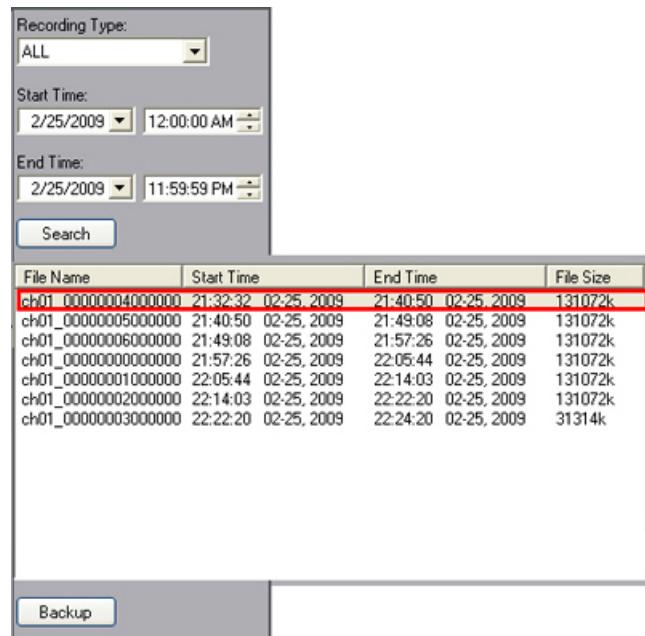
4. Click **Search**. If the internal video storage device contains the video file(s) that correspond the search criteria, the list of saved video files will be displayed in the Search panel.

If the internal storage device contains no video files that match the search criteria, the following message will be displayed: "Search has completed. No video files matching the settings have been found. Check recording schedule settings or change the search settings and try again. Note that this Annexus device may not support local video recording."

When recording Continuously, Annexus device will split the video recording into 128MB segments. Once the video segment size reaches 128MB, a new file is created. Video recording from each video channel is saved into a separate file.

When recording based on Motion, Alarm or Motion+Alarm activity, the a new video file will be created for each motion and/or alarm event. Remember that the Pre- and Post-alarm Recording setting will affect the length of the recorded video segment.

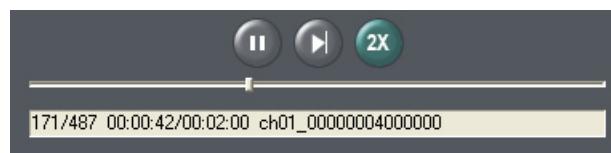
Scroll to see statistics for each stored video file: **File Name, Start Time, End Time, File Size**.



3.4.3. Playback Control Panel

To play back the video recording file saved on the internal storage device, perform video search as outlined in [Searching Backup Video Recordings](#) section.

To start video playback, double-click the desired video clip OR select the desired video clip from the list and click the Play  button in the Control Panel. The video playback will start immediately. To control the video playback, use [Playback Control Panel](#).



Playback Panel includes: **Control Buttons, Seek Slider, Status Bar**.

Control buttons allow to pause/resume playback, display video frame-by-frame or increase the playback speed.

Drag the seek slider to immediately move to the desired location in the video file.

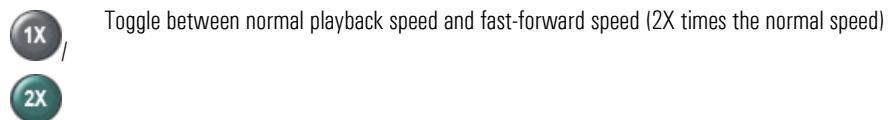
Status bar displays the following statistics: Frame #, Total number of frames, playback time elapsed, total playback duration time, backup video file name.

Control Buttons

 Toggle between Play and Pause mode. Click Pause/Play to pause/resume the playback.



Stop playback and show the next frame

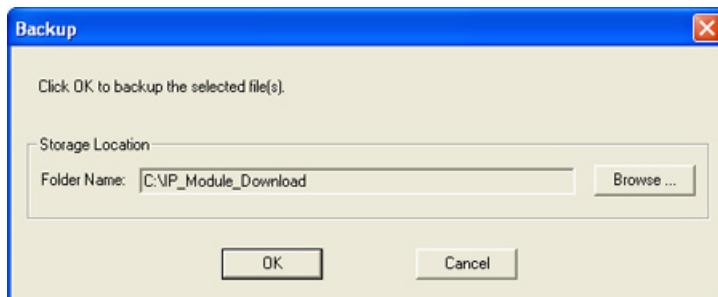


3.4.4. Saving Backup Files to Local Storage

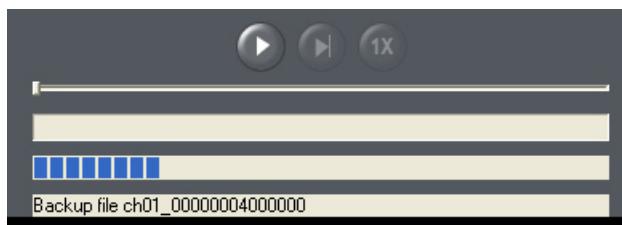
Video backup files saved onto the Annexxus internal storage device can be saved onto the local storage (local/network HDD, USB storage device) to prevent valuable data being overwritten.

To save the individual backup file onto the local storage, do the following:

1. Perform video search as outlined in Searching Backup Video Recordings section
2. Select the desired video clip from the list and click **Backup**. (To backup multiple video clips at the same time, hold down the Shift/Ctrl key while selecting the files from the list). *Backup* window will be displayed.
3. In the *Backup* window, select **Storage Location**. Click **Browse...**, locate and select the destination folder on a local or network hard drive, where the *.axv video file will be stored. Default location is C:\IP_Module_Download.



4. Click **OK** to save the the *.axv video file onto the local storage.
5. The backup progress will be shown in the Control Panel. Wait until the backup process is completed and the message is displayed: "Backup completed!" Click **OK** to close the message and repeat steps 3-5 to back up any additional video files.

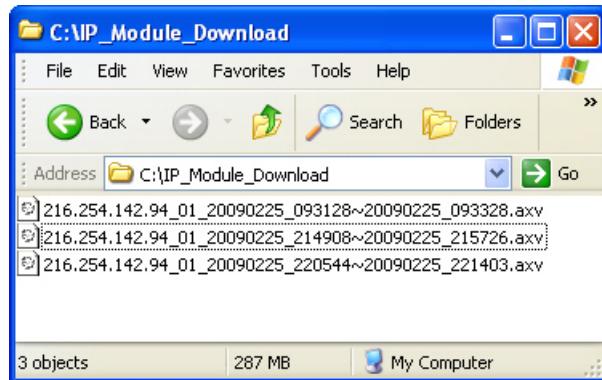


6. The video backup files are named according to the following standard: IPADDRESS_CHANNEL_StartYYYYMM-DD_HHMMSS ~ EndYYYYMMDD_HHMMSS.axv

For example, 216.254.142.94_01_20090225_220544 ~ 20090225_221403.axv video file includes video recording from the Annexxus module located on the 216.254.142.94 IP address, Video Channel 1, February 25, 2009, 10:05:44PM ~ 10:14:03PM.

Tip

Annexxus *.axv video files can be played back with Annexxus Player application.

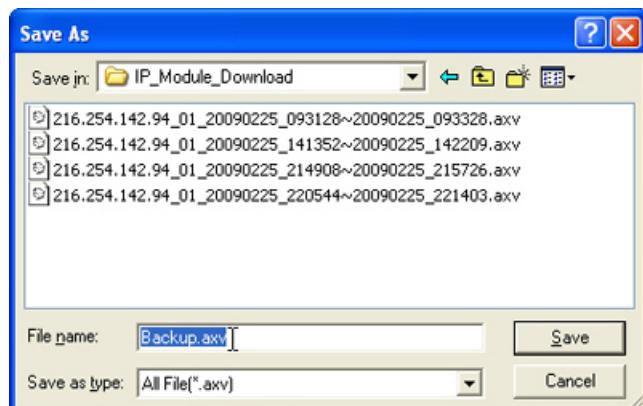


3.4.4.1. Saving a Portion of the Backup File to Local Storage

If the Annexus video backup file is too long and only a portion of that file is needed for evidence it is possible to save the segment of the Annexus backup video file to local storage.

To save a portion of the video file, do the following:

1. Perform video search as outlined in Searching Backup Video Recordings section
2. Start the video playback
3. Click the **Live Video**  button. *Save As* window will be displayed. The **Live Backup** button on the main screen  will turn teal to indicate backup in progress.



4. In the **Save In:** drop-down menu, select the local folder where the backup file will be saved; in the **File name:** box, enter the name for the new *.axv backup file.
5. Click **Save** to close the *Save As* window and to start recording the portion of the video backup file.
6. To stop the segment recording and to save the new backup file segment, click the **Live Video**  button again.

3.4.5. Saving a Snapshot to a Local Storage

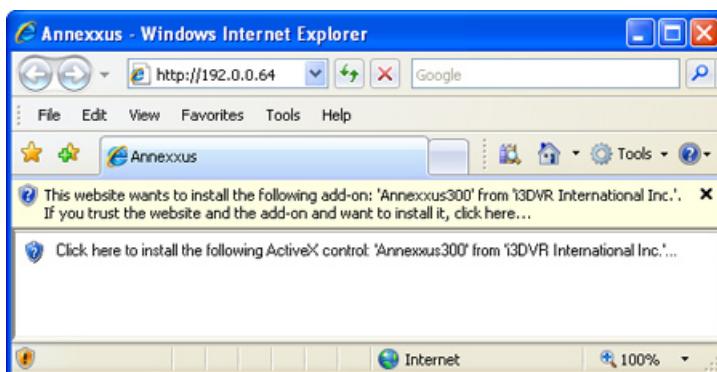
This function allows taking an instant *.bmp snapshot of the video channel during video playback and save this snapshot onto the local PC storage (local HDD, network HDD, or USB storage device). The saved *.bmp snapshots can be opened with any standard windows image viewer.

This feature is identical to the Live Snapshot function. See the Live Snapshot section for more information.

3.5. Annexus Setup

Accessing Annexus Setup mode via Annexus web browser application:

1. Connect Annexus device to the supported power source in accordance with the connections diagram
2. Connect Annexus to LAN/WAN network
3. Open Internet Explorer browser window on a local PC/laptop and enter Annexus IP address in the address line. Please contact your installer for Annexus IP address.
4. When connecting for the first time, you may be prompted to install Annexus300 Active X control. Click on the banner and select **Install Active X...** from the context menu.



5. In the Internet Explorer - Security Warning window, click **Install**.



6. Annexus web browser screen will be displayed with the Login window. Enter Annexus Username and Password and click **Login**.

7.

Click the **Setup** button on the main screen . See Annexus Advanced Setup section for more information.



Note

The login is case sensitive. The default administrative login is Username: admin;
Password: 1234

4

Appendix

Topics Covered

- Upgrading Firmware
- Troubleshooting Annexus Web Browser Application
- Annexus Finder
- Annexus Player

4.1. Upgrading Firmware

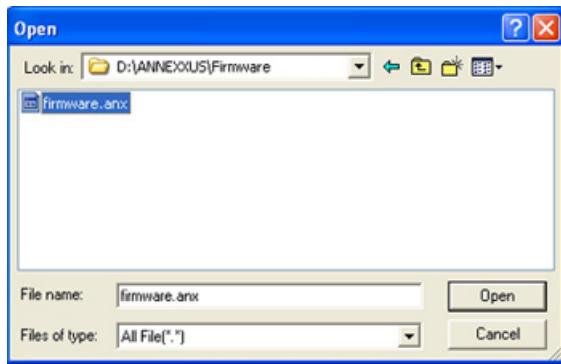
Annexxus-series systems are always shipped with the newest available firmware and do not need a firmware update. However, in the unlikely event that the firmware will need to be upgraded in the future, follow the instructions below.

Important

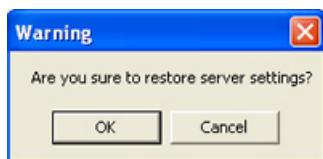
Firmware may only be upgraded by the administrative user.

For firmware update, use Annexxus web browser application.

1. Access Annexxus setup via Internet Explorer. Follow instruction in Annexxus Setup section.
2. Open Device Information setup tab
3. Select **Firmware Upgrade** radio button
4. Click **Browse...** button, locate and select the newest *.anx firmware file, and click **Open**.



5. Click **Upgrade**. Remote Upgrade Status message will change to "Device is updating, please wait!"
6. Wait until the Status message changes to "Update completed!"
7. Click **Restore** button in the bottom left corner of the Setup window to apply default settings from the new firmware package. All custom settings will be erased.
8. Click **OK** in the Warning message window shown below.



9. "Upgrade completed, please reboot device!" message will be displayed. Click **OK** to close it.
10. Reboot Annexxus device.
11. Close Internet Explorer window with Annexxus web browser and open a new Internet Explorer Browser window.
12. In the IE window, go Tools -> Properties, the *Internet Options* window will be displayed.

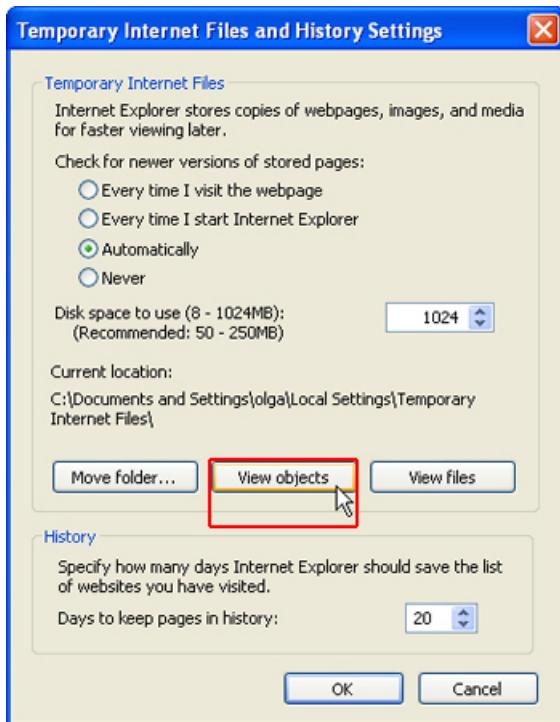
13. In the *Internet Options* window, click **Settings** under Browsing history. *Temporary Internet Files and History Settings* window will be displayed.
14. In the *Temporary Internet Files and History Settings* window, click **View objects**. Download Program Files folder window will be displayed.
15. Remove i³ Annexus ActiveX control and re-connect to the Annexus device via Internet Explorer.
16. Download new ActiveX control and log in. New firmware and new firmware settings have now been applied to Annexus device.

4.2. Troubleshooting Annexus Web Browser Application

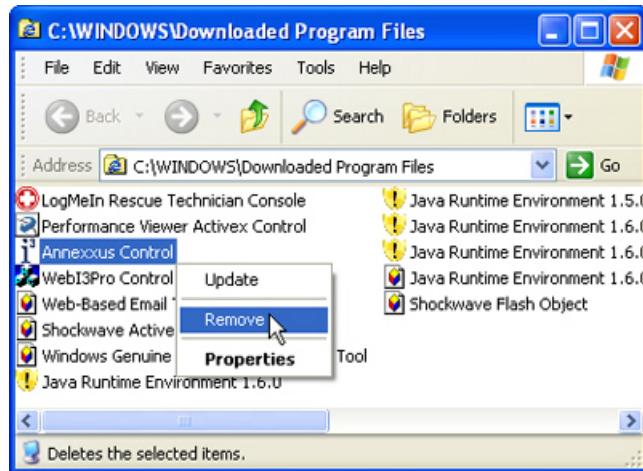
In order to connect to Annexus device through the Internet browser, Windows must download and install Annexus300 Active X Control onto the system. If the Annexus connection through Internet Explorer was unsuccessful, try to delete and re-install Annexus300 control.

To delete Annexus300 Active X control, follow the steps below:

1. Access Control Panel and select Internet Options item. Internet Properties window will be displayed.
2. In the Browsing History section, click the **Settings** button. *Temporary Internet Files and History Settings* window will be displayed.
3. In the *Temporary Internet Files and History Settings* window, click the **View objects** button. *C:\WINDOWS\Downloaded Program Files* folder window will be displayed.



4. In the *C:\WINDOWS\Downloaded Program Files* folder window, locate Annexus Control object. Right-click on Annexus Control and select **Remove** from the context menu.



Wait while Annexus Control Active X object is being removed from your system. Attempt to connect to the Annexus device through Internet Explorer again. If the connection is once again unsuccessful, please contact our technical support for help at 1.877.877.7241 or by email at support@i3dvr.ca.

4.3. Annexus Finder

Annexus Finder locates all Annexus 301-series devices on the network and displays important information about each individual Annexus device, including IP Address, Subnet Mask, Port number, Firmware version, and MAC Address.

Annexus Finder application allows configuring the IP Address and the Subnet Mask for the detected Annexus 301-series devices as well as resetting the device's password to the factory default: "1234".

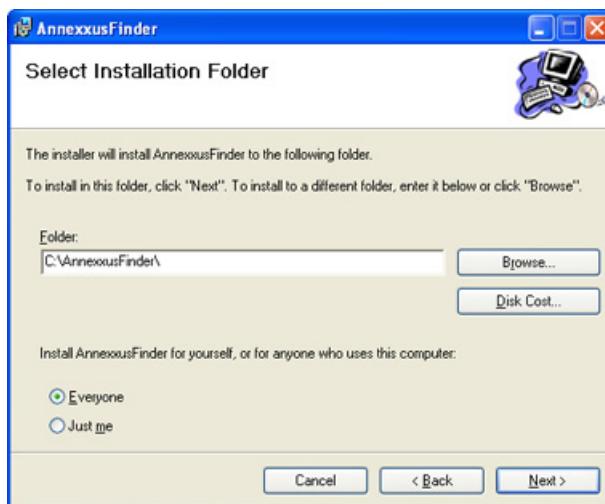
4.3.1. Installing Annexus Finder

Each Annexus-series encoder is accompanied by the Resource CD. Locate the CD that was shipped with your Annexus encoder and insert it into your system's optical drive.

On the CD, locate and open the Annexus_Finder folder.

To install AnnexusFinder application, follow the steps below:

1. Double-click the **Setup.exe** file
2. In the first setup window, click **Next**
3. In the *Select Installation Folder* setup window, select installation drive and folder by clicking **Browse...** or keep the default installation folder (recommended). Select **Everyone** radio button and click **Next**.



4. In *Confirm Installation* setup window, click **Next** to proceed with the installation
5. Wait while the Annexus Finder software is installing onto the local system
6. WinPcap installation will be automatically launched. You must install WinPcap library for the proper functioning of the Annexus Finder application.

In the *WinPcap 4.0.2 Installer* window, click **Next**

7. In the following WinPcap installer window, click **Next**
8. In the *WinPcap License Agreement* window, read the WinPcap license terms (scroll to read the entire document). Then click **I Agree** button.

9. Wait while the WinPcap is installing onto the local system.

Important

To the virus protection software users:
make sure to allow WinPcap library to operate on your system.

Wait for the *Installation Complete* setup window to be displayed and click **Close**.

Annexxus Finder is now installed on your system and is ready to use.

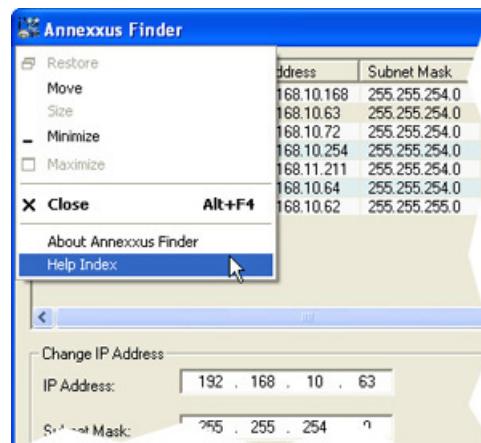
10.

4.3.2. Locating Annexxus Devices



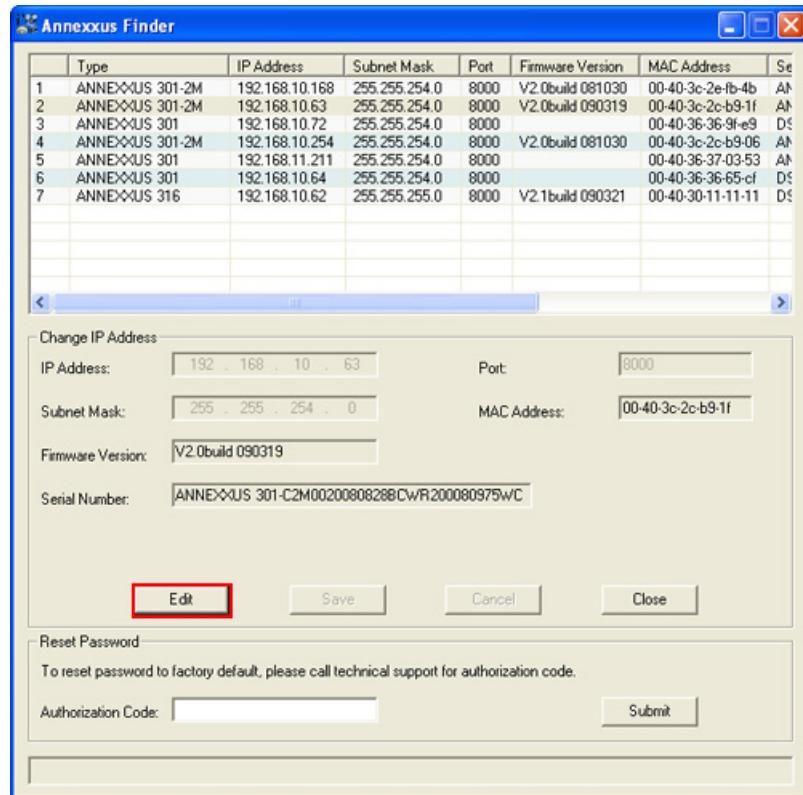
To launch Annexxus Finder application, double-click the **AnnexxusFinder** icon on the Desktop.

To display Annexxus-series User Guide, click on the Annexxus Finder icon in the top left corner of the Annexxus Finder window and select **Help Index** from the drop-down menu.



Annexxus Finder window will be displayed. All Annexxus 301-series devices on the network will be automatically detected and displayed in the Annexxus Finder list. In the example below, Annexxus Finder was able to locate four (4) Annexxus 301 IP cameras and three (3) Annexxus 301-2M MegaPixel cameras (301C2M or 301D2M) on the local network.

By selecting a specific device in the list with the mouse cursor, detailed information for each device will be displayed underneath: IP Address, Subnet Mask, Port, MAC Address, Firmware version, Serial Number.



4.3.3. IP Address/Subnet Mask Setup

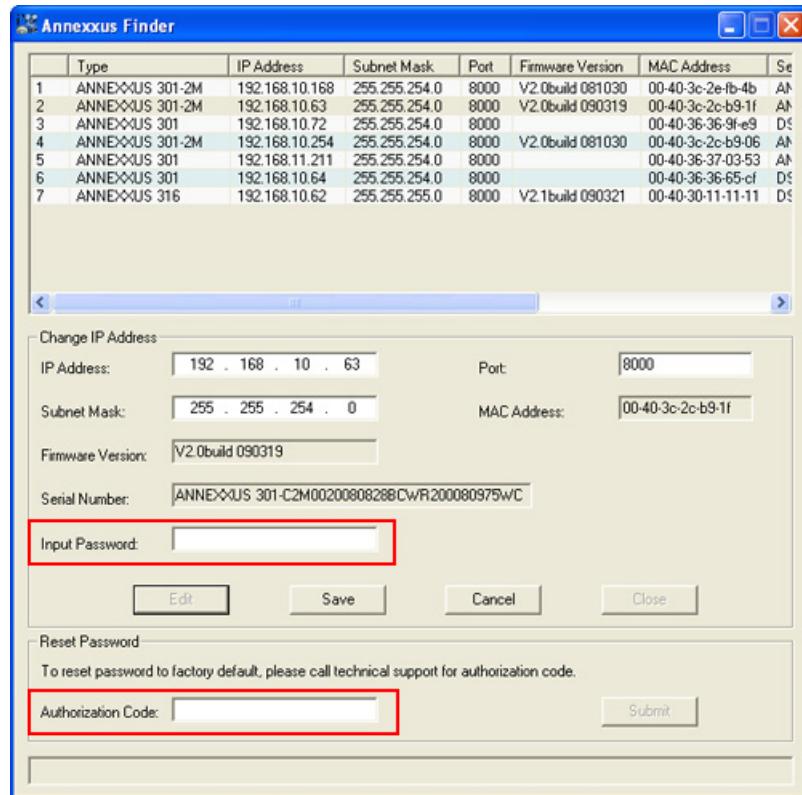
To edit the Annexxus 301-series IP Address and/or the Subnet Mask, follow the steps below:

1. Select the desired device in the list
2. Click the **Edit** button. The **IP Address** and **Subnet Mask** fields will become enabled for editing.
3. Enter the device's new IP Address and Subnet Mask
4. Enter the device's password and click the **Save** button



Tip

Default password for all Annexxus devices is "1234".



4.3.4. Resetting Password to Factory Default

If the Annexxus device's password is unknown or has been lost, it needs be reset to the factory default setting before device's IP Address and Subnet mask configurations may be changed.

To reset the device's password, please follow the steps below:

1. Contact our technical support department at 1.877.877.7241 or by email at support@i3dvr.ca
2. Inform our technical support representative that the password for your Annexxus device needs to be reset. Write down the **Authorization Code** provided to you.
3. Enter the **Authorization Code** obtained from our technical support representative into the corresponding field in the Annexxus Finder window
4. Click the **Submit** button. The device's password will be reset to the factory default setting: **1234**

 **Note**

Custom settings with the exception of the default login and password will not be reset after the Authorization Code is submitted.

4.4. Annexus Player

Annexus Player allows to play back the Annexus backup video files saved onto the local storage drive. Annexus Player application allows converting Annexus video files from Annexus *.axv file format to the conventional *.avi format.

Important note to multiple monitor users: Your Annexus Player application window must be located on the primary monitor display. If the application window is located on the secondary monitor, the video will not be displayed.

If the system needs to be modified or repaired, a certified i³ Dealer/Installer must be contacted. Otherwise, the system warranty will be voided. With any problems or questions regarding our products, contact your local i³ Dealer/Installer.

4.4.1. Installing Annexus Player

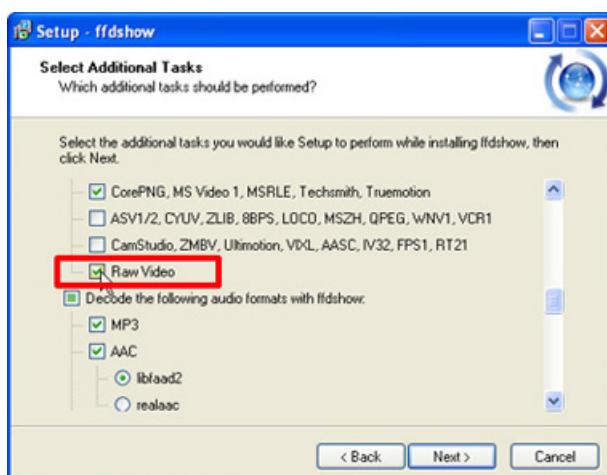
Each Annexus-series encoder is accompanied by the Resource CD. Locate the CD that was shipped with your Annexus encoder and insert it into your system's optical drive.

On the CD, locate and open the Annexus_Player folder.

Start by installing ffdshow media decoder and encoder onto your system. Ffdshow codec package will ensure that the *.avi video files converted with the Annexus Player are properly displayed by Windows Media Player.

To install ffdshow codec package, follow the steps below:

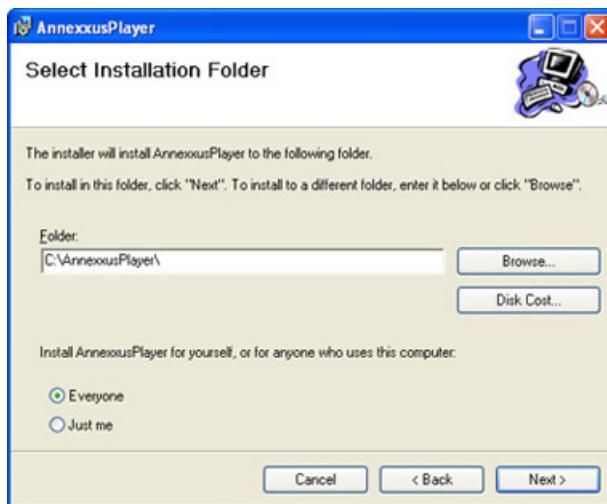
1. Double-click the **ffdshow-20080727(DivX codec).exe** file
2. In the *Select Setup Language* window, change the installation language if desired and click **OK**
3. In the first setup window, click **Next**
4. In the *Select Destination Location* setup window, select installation drive and folder by clicking **Browse...** or keep the default installation folder (recommended). To proceed, click **Next** when done.
5. In the *Select Components* setup window, click **Next**
6. In the *Select Start Menu Folder* setup window, click **Next**
7. In the *Select Additional Tasks* setup window, check off **Raw Video** checkbox



8. In the *Management of Compatibility Issues (VIDEO)* setup window, select **Do Not Limit** radio button and click **Next**
9. In the *Management of Compatibility Issues (AUDIO)* setup window, select **Do Not Limit** radio button and click **Next**
10. In the *Ready to Install* setup window, click **Install**. Wait while the ffdshow is installing on your system
11. In the *Completing the ffdshow Setup Wizard* window, click **Finish**. Ffdshow is now installed on your system and you may proceed with the Annexxus Player installation.

To install Annexxus Player, follow the steps below:

1. Double-click the **setup.exe** file inside the Annexxus_Player folder
2. In the first setup window, click **Next**
3. In the *Select Installation Folder* setup window, select installation drive and folder by clicking **Browse...** or keep the default installation folder (recommended). Select **Everyone** radio button and click **Next**.



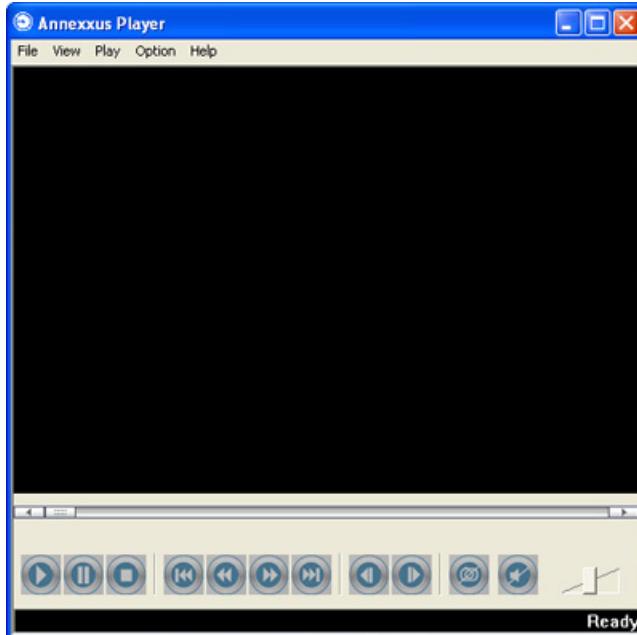
4. In *Confirm Installation* setup window, click **Next** to proceed with the installation
5. Wait while the Annexxus Player software is installing onto the local system
6. Wait for the *Installation Complete* setup window to be displayed and click **Close**. Annexxus Player is now installed on your system and ready to use.

4.4.2. Opening and Playing Back *.axv Files

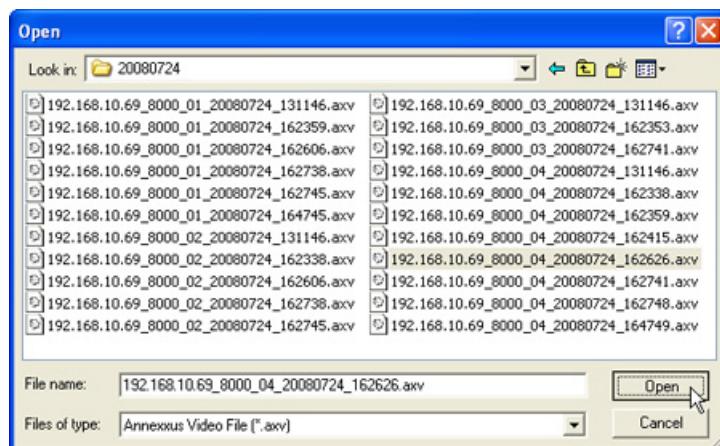
To play the Annexxus backup video file in Annexxus Player, follow the steps below:

1. Launch the Annexxus Player application.

To open Annexxus Player application, double-click the Annexxus Player shortcut created on the Desktop  or select Annexxus Player from the Startup menu. The Annexxus Player main window will be displayed..



2. To open an *.axv file, go to **File** -> **Open** menu. The *Open* window will be displayed.
3. Inside the *Open* window, locate the backup folder, where the *.axv files are stored or locate the Annexus default video backup folder: IP_Module_Recording.



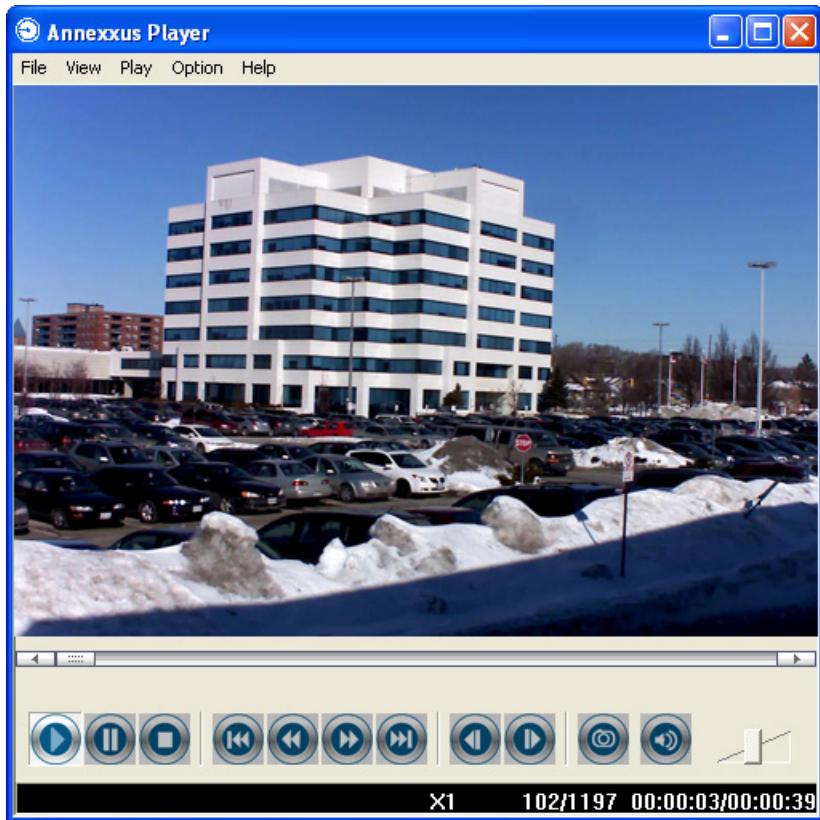
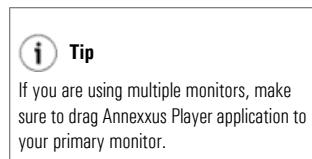
4. The video backup files are named according to the following standard: IPADDRESS_PORT_CHANNEL_YYYYMM-DD_HHMMSS.axv.

For example, 192.168.10.63_8000_01_20080423_141000.axv video file was recorded from the Annexus module located on the 192.168.10.63 IP address, Port 8000, Video Channel 1, April 23, 2008 at 2:10PM.


Tip

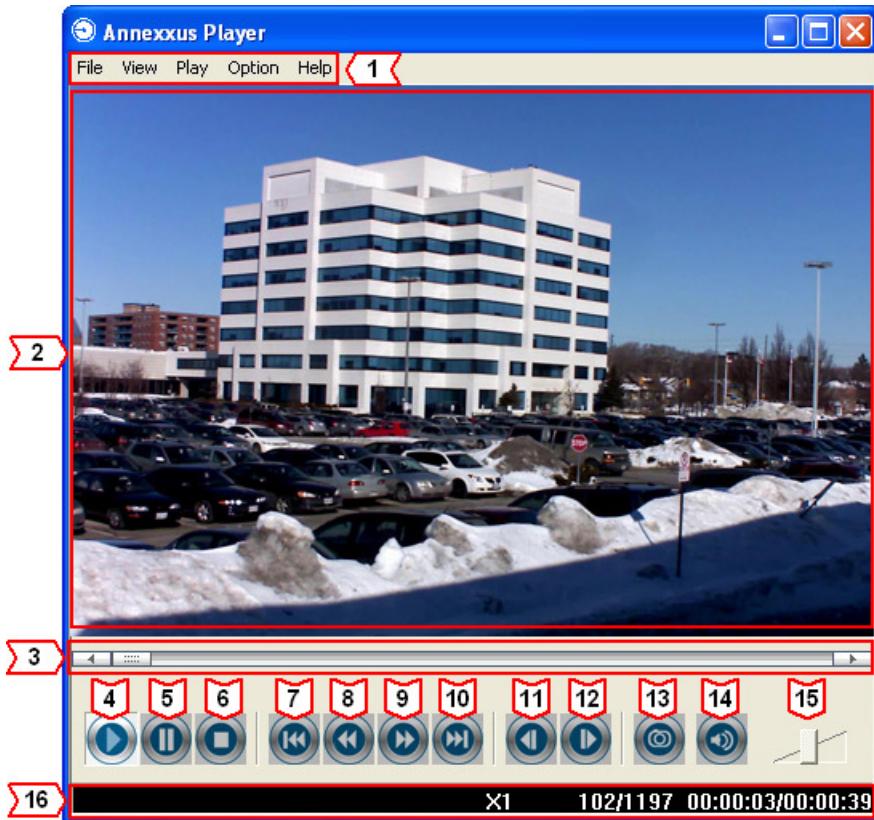
You may also open an *.axv video file in Annexus Player by locating it on your system and double-clicking it. The file will open and play in Annexus Player if it is properly installed on your system.

Select the desired *.axv video file and click **Open**. The file will begin playing in the Annexus Player immediately.



4.4.2.1. Playback and Viewing Controls

Annexxus Player window contains the following areas:

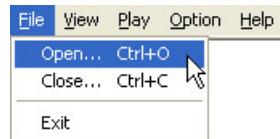


Use the playback control buttons as described below to control video playback.

1. Menu bar.
2. Video playback
3. Seek slider. Drag the slider to immediately move to the desired location in the video file.
4. Start/resume playback
5. Pause playback
6. Stop playback
7. Rewind to the beginning of the video file
8. Reduce playback speed. Available speeds: $\frac{1}{2}$, $\frac{1}{4}$, 1/8th, 1/16th of the normal speed
9. Increase playback speed. Available speeds: 2X, 4X, 8X, 16X times the normal speed
10. Fast forward to the end of the video file
11. Stop playback and show the previous frame
12. Stop playback and show the next frame
13. Save a *.jpeg snapshot to the default location. Go **Option -> Snapshot Location...** to set the default snapshot folder.
14. Mute/Un-mute audio (if available)
15. Volume control slider
16. Status bar: Playback speed, Frame #, Total number of frames, playback time elapsed, total playback duration time.

4.4.2.1.1. Menu Bar

File Menu

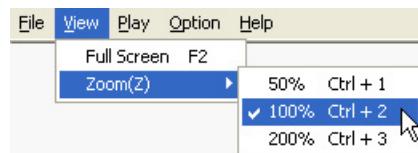


Open... (Ctrl + O) Open an Annexus *.axv video backup file

Close... (Ctrl + C) Close the current *.axv video backup file. Enabled only while video file is open

Exit Close Annexus Player application

View Menu



Full Screen (F2)

Maximize the Annexus Player window to the full screen. Enabled only while video file is playing.

Zoom

50% (Ctrl + 1)

Reduce the size of the playback window to 50%. Enabled only while video file is playing.

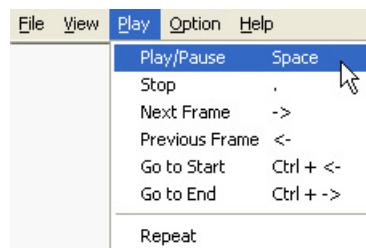
100% (Ctrl + 2)

Play back the video file in its actual size. Enabled only while video file is playing.

200% (Ctrl + 3)

Increase the size of the playback window to 200%. Enabled only while video file is playing.

Play Menu



Play/Pause (Space)

Start/resume playback

Stop (.)

Stop playback

Next Frame (->)

Stop playback and show the next frame

Previous Frame (<-)

Stop playback and show the previous frame

Go to Start (Ctrl + <-)

Rewind to the beginning of the video file

Go to End (Ctrl + ->)

Fast forward to the end of the video file

Option Menu



Snapshot Location...

Set the default saving location for all Annexxus Player *.jpeg snapshots. See Saving and Viewing a Snapshot section for more information.

Convert to AVI...

Convert the open *.axv video file to *.avi format. See Converting *.axv File to *.avi Format section for more information.

Help Menu



About Annexxus Player...

Show Annexxus Player software version

Help Index

Display this help file

4.4.3. Converting *.axv File to *.avi Format

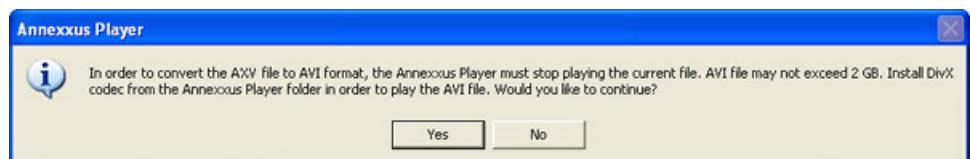
Annexxus Player allows the users to convert the open *.axv video file to *.avi format.

Some users may choose to convert the Annexxus backup video files from the Annexxus *.axv format to a more conventional *.avi format. While *.axv format offers a certain level of security since it's not easily editable, some customers may prefer a more common video format that can be displayed with Windows Media Player application, readily available on most PCs.

To convert an *.axv file to *.avi format, follow the steps below:

1. Launch the Annexxus Player application
2. Open an *.axv file
3. Go to **Option** -> **Convert to AVI...** menu. The following message will be displayed: "In order to convert the AXV file to AVI format, the Annexxus Player must stop playing the current file. AVI file may not exceed 2 GB. Install DivX codec from the Annexxus Player folder in order to play the AVI file. Would you like to continue?"

Click **Yes** to stop the playback and start converting the *.axv file to *.avi format. Click **No** to continue playback without converting the file.



Warning

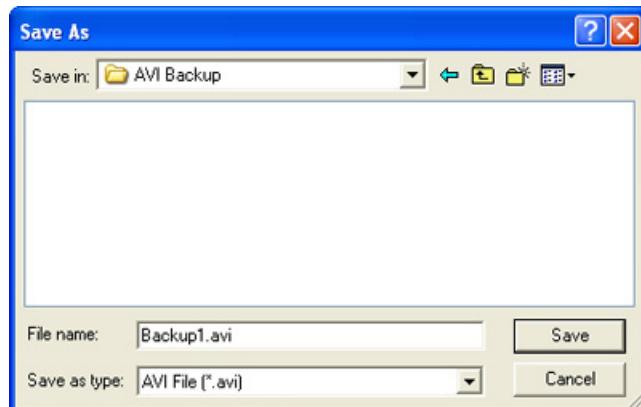
ffdshow codec package must be installed on your system to play the *.avi files after conversion. Read the ffdshow installation section for more information.

The final *.avi file should not exceed 2 GB. If the final *.avi file exceeds 2 GB, it will be split in multiple *.avi files, which will be saved into the selected folder. Additional *.avi files will retain the original name and will be numbered in sequence.

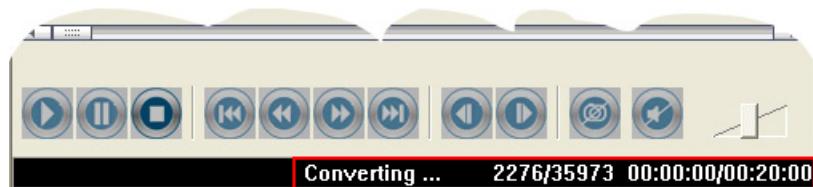
<p>Tip</p> <p>As a guideline, assume that a 1-minute video clip recorded with 1600x1200 resolution at 7 fps results in a 1 GB *.avi file.</p>
<p>Important</p> <p>More than 10MB of free space must be available on a destination partition. If the free space does not exceed 10MB, *.avi conversion will not be performed.</p>
<p>Important</p> <p>Annexus Player does not allow data backup onto a CD/DVD media. You may only select a local or a network drive.</p>

4. When the user clicks **Yes** in the message shown in Step 3, the *Save As* window will be displayed.

Select the folder, where the new *.avi file will be saved into and enter the file name in the **File name:** line. Click **Save** when done.



5. The status bar will display "**Converting....**" until the conversion process is completed.



6. Once the conversion is complete, the status bar message will change to "**Finished AVI Converting**". The new *.avi file(s) is(are) now available for playback in the folder selected in the Step 4. You may resume playback, open another *.axv file or exit out of the application.



4.4.4. Saving and Viewing a Snapshot

Annexus Player allows the users to save the video frame of the *.axv video as a *.jpeg snapshot file during the video playback.

To save the video frame as a snapshot, follow the steps below:

1. Start by selecting the default storage location for all Annexus Player *.jpeg snapshots.
2. Go to **Option -> Snapshot Location...** to set the default snapshot folder. *Browse for Folder* window will be displayed.

Important

Annexxus Player does not allow data backup onto a CD/DVD media. You may only select a local or a network drive.

3. Select the storage folder from the list and click **OK**. All snapshots taken with Annexxus Player applications will be saved into this folder.

4. Open an *.axv file

5. Use the playback navigation buttons, seek slider or the Play Menu controls to navigate to the desired frame.

6.

Click the **Snapshot** button  on the control panel to instantly save the *.jpeg image to the folder selected in the Step 3. No message will be displayed once the file is saved.

The file will be automatically named and numbered. All *.jpeg snapshots are named using the following template "snapshotXX.jpeg".

Tip

The video does not have to be paused in order to click the Snapshot button.

Index

A

- activate channels, 67
- add encoder manually, 26
- add encoder to SRX-Pro/iP-Pro server, 26
- add operator user, 58
- administrator password change, 57
- administrator user, 57
- advanced IP encoder setup, 29
- alarm input setup, 50
- alarm logs, 60
- alarm recording, 36
- Annexus 301
 - front connection diagram, 4
 - front view, 4
 - rear connection diagram, 5
 - rear view, 5
- Annexus 301/301C limitations, 27
- Annexus 301C
 - connection diagram, 7
 - rear view, 7
 - side view, 7
 - specifications, 6
- Annexus 301C2M
 - connection diagram, 10
 - rear view, 10
 - side view, 10
 - specifications, 8
- Annexus 301D2M
 - alarm/PTZ extension cable, 14
 - audio extension cable, 13
 - front view, 13
 - main cable, 13
 - specifications, 11
 - spot monitor cable, 14
- Annexus 304, 14
 - connection diagram, 15
 - daVinci camera connection, 16
 - front view, 15
 - rear view, 15
- Annexus 304 limitations, 27
- Annexus Finder, 90
 - installation, 90
- Annexus player, 94
 - file menu, 99
 - help menu, 100
 - instal ffdshow codec package, 94
 - installation, 94
 - menu bar, 99
 - option menu, 99
 - playback controls, 97

- save snapshot, 101
- view menu, 99
- approved combinations, 3
- associate motion with control output, 40
- associate sensor with control output, 52
- associate sensor with ptz preset, 54
- associate sensor with video channel, 53
- associate video loss with control output, 41
- associate view tampering with control output, 43
- audio settings panel, 69
- authorization code, 93
- Auto Gain, 72
- axv file, open, 95
- axv file, play, 95
- axv to avi, 100

B

- basic IP encoder setup, 27
- bitrate, 35
- bitrate recommendation, 35
- bitrate type, 35
- bitrate, fixed, 35
- bitrate, variable, 35
- browser main screen, 66

C

- change administrator password, 57
- change IP, 19
- change password, 57
- channels setup, 32
- combination limitations, 3
- configure main stream, 33
- continuous recording, 36
- control on alarm activity, 52
- control on sensor activity, 52
- control on tampering, 43
- control on video loss, 41
- control output on motion, 40
- control output setup, 55
- control output time, 56
- control schedule, 55
- convert axv to avi, 100
- current user indicator, 67
- custom text overlay, 45

D

- daily recording schedule, 36
- date and time indicator, 67
- default IP, 18
- delete Active X control, 88
- delete operator user, 59
- device information setup, 30

device name, 30
draw masking area, 43
draw motion area, 39
draw tampering area, 42

E

encoder browser interface, 66
encoder clock, 22
encoder reboot, 21
encoder resolution vs fps, 27
exception configuration, 56
exception logs, 60

F

ffdshow codec package, 94
firmware upgrade, 86
Flicker Control, 72
format disk, 30
format SD card, 30
fps range based on resolution, 27
fps vs frequency, 34
fps vs resolution, 34
fps vs stream type, 35
frame size, 34
frame size vs encoder model, 34
frame size vs resolution, 34
frame types, 34
full screen button, 67

H

hide channels, 67

I

I-interval, 34
I-interval recommended value, 34
instal ffdshow codec package, 94
install Active X, 19
internal video recording setup, 36

L

limitations, 3
live audio streaming, 68
live backup, 74
live backup button, 67
live mode button, 66
live snapshot backup, 76
live snapshot button, 67
live snapshot storage location, 76
live video backup, 74
live video backup storage location, 74
live video backup, stop, 74

live video streaming, 68
locate annexus encoders on LAN, 91
log records setup, 60
log type, 60
login into web browser, 20
login/logout button, 67

M

main stream setup, 33
main stream vs sub stream, 33
manually add encoder, 26
modify operator user, 58
motion and alarm recording, 36
motion detection area, 39
motion detection schedule, 39
motion detection setup, 38
motion recording, 36

N

network setup, 47
normally closed, 51
normally open, 51

O

on-screen display setup, 44
open Annexus IE browser, 19
operation logs, 60
operator user, 57
OSD display, 71
overwrite mode, 30

P

package contents, 4
password change, 57
playback buttons, 80
playback control panel, 80
playback internal video, 77
post-alarm recording, 38
power requirement, 16
pre-alarm recording, 38
precautions, 2
privacy masking area, 43
privacy masking setup, 43
ptz address, 49
ptz baud rate, 48
ptz control panel, 70
ptz preset on sensor activity, 54
ptz protocol vs baud rate, 48
ptz protocols, 48
ptz setup, 48
ptz type, 48

R

reboot, 21
recording indicator, 67
recording type search, 79
remote connection to encoder, 64
reset password to factory default, 93
resolution vs fps, 34
resolution vs stream type, 35

S

save a portion of backup file to hard drive, 82
save a snapshot to hard drive, 83
save backup files to hard drive, 81
save backup files to local storage, 81
saving new IP, 21
search by recording type, 79
search for encoder via SRX-Pro/iP-Pro server, 24
search internal video, 77
search logs by type, 60
search mode, 77
search mode button, 66
search mode window, 77
searching backup video recordings, 79
searching by time, 62
sensor and alarm recording, 36
sensor input setup, 50
sensor recording, 36
sensor schedule, 51
sensor type, 51
sensor/control setup, 50
setup annexus IP with Finder, 92
setup annexus Subnet Mask with Finder, 92
setup mode button, 67
show channel name on-screen, 44
show date/time on-screen, 44
Shutter, 72
stream type vs fps, 35
stream type vs resolution, 35
sub stream vs main stream, 33
synchronize clock, 22

T

tampering schedule, 42
time and type video search, 62
time video search, 62
timeframe recording schedule, 37
tree list, 67
troubleshoot annexus browser, 88
two-way audio feature, 69

U

unpacking, 4

upgrade annexus firmware, 86
upgrade encoder firmware, 86
user management setup, 57
user name setup, 58
user password setup, 58
user privileges, 58

V

video adjustment panel, 68
video loss schedule, 41
video loss setup, 41
video recording on alarm activity, 53
video recording on sensor activity, 53
video recording schedule setup, 36
video searching by time, 62
video type search, 62
view tampering area, 42
view tampering schedule, 42
view tampering setup, 41
viewing encoder via IE, 64

W

web browser login, 20
White Balance, 72